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1956-57  
Report of Alfalfa Nurseries  
Eastern Alfalfa Improvement Conference

Conducted cooperatively with the various  
State Agricultural Experiment Stations  
and

The United States Department of Agriculture,  
Agricultural Research Service, Forage and Range  
Research Branch in eastern United States

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# CONTENTS

|                                                                                                          | Page     |
|----------------------------------------------------------------------------------------------------------|----------|
| Introduction . . . . .                                                                                   | 1        |
| Reports:                                                                                                 |          |
| Cooperative Tests for Southeastern U.S. - Summarized by<br>C. H. Hanson . . . . .                        | 2        |
| CONNECTICUT - Storrs<br>B. A. Brown . . . . .                                                            | 6        |
| GEORGIA - Blairsville<br>Experiment<br>J. M. Elrod . . . . .                                             | 12       |
| KENTUCKY - Lexington<br>LaGrange<br>Princeton and Campbellsville<br>Woodford<br>Wm. H. Stroube . . . . . | 15       |
| TENNESSEE - Blount County<br>H. A. Fribourg . . . . .                                                    | 20       |
| MARYLAND - College Park<br>Beltsville<br>R. C. Leffel . . . . .<br>H. O. Graumann . . . . .              | 21<br>23 |
| MISSISSIPPI - State College<br>H. W. Johnson. . . . .                                                    | 26       |
| NEW YORK - Ithaca<br>Saltonstall<br>Canton<br>C. C. Lowe . . . . .                                       | 27       |
| PENNSYLVANIA - University Park<br>J. L. Starling . . . . .                                               | 46       |
| RHODE ISLAND - Kingston<br>R. C. Wakefield . . . . .                                                     | 53       |
| SOUTH CAROLINA<br>E. B. Eskew . . . . .                                                                  | 55       |
| WEST VIRGINIA - Point Pleasant<br>Morgantown<br>Valentin Ulrich. . . . .                                 | 56       |



1956-57  
Report of Alfalfa Nurseries  
Eastern Alfalfa Improvement Conference

Report compiled by H. O. Graumann, Research Agronomist, Forage and Range Research Branch, Agricultural Research Service, U. S. Department of Agriculture.

INTRODUCTION

This is the second Alfalfa Nurseries Report assembled by the Eastern Alfalfa Improvement Conference. Inasmuch as no report was prepared in 1956, this publication covers the two crop years of 1956 and 1957.

Reports submitted by the various States comprise data from an array of alfalfa breeding materials and varieties. The data in this compilation are inconclusive and represent progress reports only, and as such may contain findings which may or may not be verified in subsequent experiments. Data reported, and statements contained herein, do not constitute publication. For this reason, citation to any part of this Report should not be published without prior permission from the Experiment Station(s) and worker(s) concerned.



Cooperative Variety Trials in the Southeastern States  
(Summary)

Data from 10 locations in 6 states are included in this report. An attempt was made to seed all tests in 1955, with the determination of yield beginning in the following year. Due principally to weather conditions, some of them were either not seeded in that year, or poor stands resulted, requiring a new test to be seeded in the following year. In one case (Virginia), yields were determined in 1956, but not in 1957, due to loss of harvesting equipment by fire. Information on time of seeding, seeding rate, soil type, fertilization, etc., is given in table 1. Wide ranges in soil type and native soil fertility are noted.

The following varieties were included at each of the 10 locations: Atlantic, Buffalo, Du Puits, Vernal and Williamsburg. Narragansett was included at all except one. The number of locations for 5 North Carolina synthetics ranged from 8 to 10. Failure to include all synthetics at two locations was due to insufficient seed. In addition to this core of 11 entires, the individual tests included any other varieties that the worker wished to add.

Hay yields for 1956 are shown in table 1a; yields for 1957, and 1956 and 1957 combined, are given in table 2. The yields for the respective varieties are expressed in percentage of the average of Atlantic, Buffalo and Williamsburg. The rank of the core varieties with numerically greater yields than the average of the checks is as follows for the two years (descending order):

N.C. Syn. B (51)6  
Du Puits  
N.C. Syn. D(51)12  
N.C. Syn. D(51)10  
N.C. Syn. A(51) 5  
Narragansett  
N.C. Syn B(51) 7  
Williamsburg  
Atlantic  
Vernal

These tests have not been conducted sufficiently long to determine the relative persistence of the respective entries. Nor has it been possible as yet to relate the performance of the various entries to any of the environmental conditions associated with locations. It has been noted that the yields of Du Puits at the various locations are among the highest and the lowest. The low yields may be related to certain crown rots to which this variety is susceptible. It is hoped that more attention can be given to disease resistance.

Data reported by:

Arkansas - M.S. Offutt and James Jacks  
Georgia - E. R. Beatty  
Kentucky - W. H. Stroube  
N. Caro. - C. H. Hanson  
Tenn. - H. A. Fribourg  
Virginia - T. J. Smith

Summarized by: C. H. Hanson



Table 1. Fertilizer applications and other information pertaining to tests reported in tables 1a and 2.

|                                   | Waynesville, N.C.                    | Rocky Mt. N.C.   | Salisbury, N.C.    | Athens, Ga.           | Woodford Co., Ky. | Princeton Co., Ky. | Blount Co., Tenn. | Fayetteville, Ark.                                                 | Osceola Ark.      | Blacksburg, Va. |
|-----------------------------------|--------------------------------------|------------------|--------------------|-----------------------|-------------------|--------------------|-------------------|--------------------------------------------------------------------|-------------------|-----------------|
| Soil type                         | Hiwasee clay loam                    | Norfolk "family" | Davidson clay loam | Cecil sandy clay loam | Loam              | Clay loam          | Alcoa silt loam   | Newtonia silt loam                                                 | Sharkey clay loam | ?               |
| Fertilization at seeding (lbs./A) |                                      |                  |                    |                       |                   |                    |                   |                                                                    |                   |                 |
| Lime                              | 3000                                 | 4000             | 3000               | 4000                  | None              | 4000               | None              | 4000                                                               | None              | ?               |
| Fertilizer                        | 800                                  | 1000             | 800                | 1000                  | None              | 550                | 800               | 40 (N), 80 (P <sub>2</sub> O <sub>5</sub> ), 80 (K <sub>2</sub> O) | None              | ?               |
| (Boron in all fert.)              | 500 (P <sub>2</sub> O <sub>5</sub> ) | (2-12-12)        | (2-12-12)          | (0-10-20)             | (0-10-20)         | (3-10-10)          | (4-12-4)          |                                                                    |                   |                 |
| Annual fert.                      | 700                                  | 800              | 800                | 1000                  | 400               | 400                | 250               | 50 (P <sub>2</sub> O <sub>5</sub> ), 100 (K <sub>2</sub> O)        | None              | ?               |
| (lbs./A)                          | (0-9-27)                             | (0-9-27)         | (0-9-27)           | (0-10-20)             | (0-10-20)         | (0-10-20)          | (0-20-20)         |                                                                    |                   |                 |
| Boron in all fert.)               |                                      |                  |                    |                       |                   |                    |                   |                                                                    |                   |                 |
| Design of Exp.                    | Rand. block                          | Rand. block      | Rand. block        | Rand. block           | Rand. block       | Rand. block        | Rand. block       | Rand. block                                                        | Rand. block       | Rand. block     |
| No. of replications               | 4                                    | 4                | 4                  | 4                     | 4                 | 4                  | 4                 | 4                                                                  | 4                 | 4               |
| Seeding data                      | 4/9/56                               | 9/16/55          | 8/24/55            | 10/3/55               | 4/5/56            | 3/24/56            | 8/24/56           | 9/20/56                                                            | 9/5/55            | 1955            |
| Seeding rate (lbs./A)             | 23                                   | 23               | 23                 | 23-25                 | 12                | 12                 | 25                | 20                                                                 | 20                | ?               |
| Size of plots (ft.)               | 5 x 20                               | 5 x 20           | 5 x 20             | 5 x 20                | 5 x 25            | 5 x 25             | 5 x 20            | 5 x 20                                                             | 5 x 20            | 5 x 20          |

## Cooperative Uniform Test for the Southern Part of the Eastern Region

Table 1a. Seasonal yield of alfalfa varieties in percentage of checks<sup>1</sup>/ and disease scores at each of 5 locations. First year data. 1956.

| Variety               | Locations |         |       |                     |       |       | Disease scores |                    |          |                               |
|-----------------------|-----------|---------|-------|---------------------|-------|-------|----------------|--------------------|----------|-------------------------------|
|                       | Blackburg |         |       | Rocky Mt. Salisbury |       |       | Osceola        |                    | Va.      |                               |
|                       | (3 cuts)  | (1 cut) | N.C.  | (3 cuts)            | Ga.   | N.C.  | Ark.           | Wtd <sup>2</sup> / | L. spots | N.C. 4/<br>Stemph-<br>L. spot |
| I Standard varieties  |           |         |       |                     |       |       | (4 cuts)       | Av.                | 3/       | 5/<br>(root rot)              |
| Du Puits              | 102.2     | 107.5   | 143.0 | 110.0               | 87.4  | 112.5 | 3.2            | 1.0                | 3.8      | 8                             |
| Narragansett          | 107.0     | 107.5   | 131.7 | 97.9                | 82.3  | 107.6 | 4.6            | 2.0                | 3.5      | 3                             |
| Atlantic              | 113.3     | 94.6    | 110.3 | 102.3               | 96.3  | 104.0 | 5.2            | 3.8                | 4.7      | 3                             |
| Vernal                | 113.1     | 101.0   | 127.7 | 90.8                | 92.1  | 103.6 | 4.1            | 2.5                | 3.2      | 3                             |
| Kansas Common         |           |         |       |                     |       |       |                |                    |          |                               |
| Williamsburg          | 94.1      | 105.4   | 99.7  | 110.7               | 102.6 | 102.6 | 6.2            | 2.2                | 3.7      | 4                             |
| Ranger                |           |         |       |                     | 101.9 | 102.5 |                |                    | 5.5      | 5                             |
| Okla. Common          |           |         |       | 89.4                | 99.6  | 99.6  |                |                    | 2.7      | 4                             |
|                       |           |         |       |                     | 101.2 | 95.3  |                |                    | 6.0      | 5                             |
| Buffalo               | 92.6      | 101.0   | 90.0  | 86.9                | 101.9 | 93.6  | 6.1            | 2.2                | 5.0      | 5                             |
| Caliverde             |           | 121.5   |       |                     | 85.6  | 92.8  |                | 2.5                | 5.7      | 4                             |
| Lahontan              |           |         |       |                     | 91.6  | 91.6  |                | 5.0                | 5.5      | 4                             |
| II Experiment entries |           |         |       |                     |       |       |                |                    |          |                               |
| N.C. Syn A(51)5       | 104.2     | 117.2   | 115.7 | 110.8               | 94.1  | 106.4 | 4.9            | 2.2                | 3.0      | 3                             |
| N.C. Syn B(51)6       | 104.1     | 121.5   | 114.7 |                     |       | 111.1 | 5.5            | 1.5                |          |                               |
| N.C. Syn B(51)7       | 100.4     | 111.8   | 121.7 | 104.4               | 94.3  | 104.9 | 4.9            | 1.8                | 2.7      | 2                             |
| N.C. Syn D(51)10      | 96.4      | 110.8   | 117.7 |                     | 108.9 | 108.1 | 5.5            | 2.0                | 3.2      | 2                             |
| N.C. Syn D(51)12      | 110.0     | 107.5   | 114.3 | 113.9               | 110.9 | 111.8 | 4.8            | 3.0                | 4.5      | 2                             |
| N.C.M.S.A.(55)        |           | 100.0   | 105.0 |                     |       | 103.8 |                |                    |          |                               |
| N.C.M.S.B.(55)        |           | 108.6   | 124.0 |                     |       | 120.2 |                |                    |          |                               |

Table 1a. Continued

| Variety                          | Locations               |                 |                  |                 |                  | Disease scores                                       |           |                                          |                                                   |
|----------------------------------|-------------------------|-----------------|------------------|-----------------|------------------|------------------------------------------------------|-----------|------------------------------------------|---------------------------------------------------|
|                                  | Blackburg               | Rocky Mt.       | Salisbury        | Athens          | Osceola          | Wtd <sup>2</sup> /<br>Av. spots <sup>3</sup> /<br>L. | Va.<br>L. | N.C.<br>Stemph <sup>4</sup> /<br>L. spot | Arkansas<br>Anthrac. <sup>5</sup> /<br>(root rot) |
|                                  | (3 cuts)<br>Va.<br>N.C. | (1 cut)<br>N.C. | (3 cuts)<br>N.C. | (4 cuts)<br>Ga. | (4 cuts)<br>Ark. |                                                      |           |                                          |                                                   |
| A-223                            |                         |                 |                  |                 | 80.5             | 80.5                                                 |           |                                          | 4                                                 |
| A-227                            |                         |                 |                  |                 | 89.9             | 89.9                                                 |           |                                          | 4                                                 |
| Italy (016SS)                    |                         |                 |                  |                 | 91.5             | 91.5                                                 |           |                                          | 5                                                 |
| Hairy Peruvian                   |                         |                 |                  |                 | 88.9             | 88.9                                                 |           |                                          | 4                                                 |
| Ariz. Chilean                    |                         |                 |                  |                 | 86.2             | 86.2                                                 |           |                                          | 4                                                 |
| Argentine                        |                         |                 |                  |                 | 64.3             | 64.3                                                 |           |                                          | 5                                                 |
| Indian                           |                         | 109.7           |                  | 94.3            |                  | 97.4                                                 |           | 2.5                                      |                                                   |
| Chilean 215                      |                         | 121.5           |                  | 91.7            |                  | 96.7                                                 |           | 1.8                                      |                                                   |
| African                          |                         | 114.0           |                  |                 |                  | 114.0                                                |           | 3.5                                      |                                                   |
| Pilca Butta                      |                         | 107.5           |                  |                 |                  | 107.5                                                |           | 2.5                                      |                                                   |
| Talent                           |                         | 105.4           |                  |                 |                  | 105.4                                                |           | 3.5                                      |                                                   |
| Indiana Syn F                    |                         |                 |                  |                 |                  |                                                      |           | 2.2                                      |                                                   |
| Socheville                       |                         |                 |                  |                 |                  |                                                      |           | 1.0                                      |                                                   |
| LSD (.05)                        | 13.2                    | 14.9            | 10.0             | 9.6             |                  |                                                      |           | .45                                      |                                                   |
| LSD (.01)                        | 18.0                    | 22.6            | 13.3             |                 |                  |                                                      |           | .65                                      |                                                   |
| C.V. (%)                         | 8.8                     | 11              | 6                | 13.2            |                  |                                                      |           | 10                                       |                                                   |
| Actual yields of checks (tons/A) |                         |                 |                  |                 |                  |                                                      |           |                                          |                                                   |
| Atlantic                         | 3.26                    | .88             | 3.31             | 3.06            | 5.51             | 3.66                                                 |           |                                          |                                                   |
| Buffalo                          | 2.67                    | .94             | 2.70             | 2.60            | 5.82             | 3.38                                                 |           |                                          |                                                   |
| Williamsburg                     | 2.71                    | .98             | 2.99             | 3.31            | 5.83             | 3.64                                                 |           |                                          |                                                   |
| Av. of checks                    | 2.88                    | .93             | 3.00             | 2.99            | 5.72             | 3.56                                                 |           |                                          |                                                   |

1/ Checks - Av. of Atlantic, Buffalo and Williamsburg

2/ Av. obtained from percentages, weighing the % for any one location according to the number of cuttings.

3/ Leaf spots not identified. Scores 1-10, 1 = least.\*

4/ From fall 1956 planting at Rocky Mt. Scores 1-5, 1 = least.\*

5/ Considerable anthrac. also noted on Du Puits at Raleigh, N.C., &amp; on Du Puits &amp; Vernal at Blacksburg, Va.

\* Most resistant.

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Table 2. Seasonal yield of alfalfa varieties in percentage of checks<sup>1/</sup> at each of 9 locations 1957. Second year data for Rocky Mt., N.C., Salisbury, N.C., Athens, Ga., and Osceola, Ark. First year data for other locations. Blacksburg, Va. included in 1956.

| Variety                        | Locations                  |                         |                          |                      |                           |                            |                           |                             |                        |       | Average |
|--------------------------------|----------------------------|-------------------------|--------------------------|----------------------|---------------------------|----------------------------|---------------------------|-----------------------------|------------------------|-------|---------|
|                                | Waynesville, N.C. (3 cuts) | Rocky Mt. N.C. (4 cuts) | Salisbury, N.C. (3 cuts) | Athens, Ga. (6 cuts) | Woodford Co. Ky. (3 cuts) | Princeton Co. Ky. (3 cuts) | Blount Co. Tenn. (3 cuts) | Fayetteville, Ark. (5 cuts) | Osceola, Ark. (5 cuts) | 1956  | 1957    |
| <b>I Standard Varieties</b>    |                            |                         |                          |                      |                           |                            |                           |                             |                        |       |         |
| Du Puits                       | 134.6                      | 94.8                    | 126.0                    | 94.2                 | 115.4                     | 102.9                      | 140.8                     | 82.0                        | 83.4                   | 108.2 | 112.5   |
| Narragansett                   | 118.9                      | 97.5                    | 113.0                    | 86.9                 | 106.7                     | 105.8                      | 106.1                     |                             | 96.6                   | 103.9 | 107.6   |
| Atlantic                       | 103.7                      | 101.0                   | 96.6                     | 94.1                 | 108.1                     | 97.5                       | 98.3                      | 97.3                        | 100.9                  | 99.7  | 104.0   |
| Vernal                         | 105.5                      | 75.7                    | 106.8                    | 84.7                 | 109.9                     | 95.1                       | 110.9                     | 108.8                       | 97.6                   | 99.4  | 103.6   |
| <b>Kansas Common</b>           |                            |                         |                          |                      |                           |                            |                           |                             |                        |       |         |
| Williamsburg                   | 106.9                      | 113.1                   | 109.6                    | 103.6                | 95.6                      | 103.4                      | 100.7                     | 108.8                       | 102.2                  | 102.2 | 102.6   |
| Ranger                         |                            |                         |                          |                      |                           |                            |                           |                             | 105.4                  | 105.2 | 102.5   |
| Okla. Common                   |                            |                         |                          | 96.6                 |                           |                            |                           |                             | 95.8                   | 95.8  | 99.6    |
|                                |                            |                         |                          |                      |                           |                            |                           |                             | 103.1                  | 99.9  | 95.3    |
| Buffalo                        | 89.4                       | 85.8                    | 93.9                     | 102.3                | 96.3                      | 99.1                       | 101.0                     | 94.0                        | 93.8                   | 95.1  | 93.6    |
| Caliverde                      |                            | 82.3                    |                          |                      |                           |                            | 81.9                      | 61.8                        | 101.1                  | 81.8  | 92.8    |
| Lahontan                       |                            |                         |                          |                      |                           |                            | 88.4                      | 77.1                        | 95.2                   | 86.9  | 91.6    |
| <b>II Experimental entries</b> |                            |                         |                          |                      |                           |                            |                           |                             |                        |       |         |
| N.C.Syn.A(51)5                 | 122.6                      | 99.5                    | 111.0                    | 101.5                | 112.3                     | 96.3                       | 106.1                     |                             | 110.1                  | 107.4 | 106.4   |
| N.C.Syn.B(51)6                 | 127.2                      | 111.6                   | 116.5                    |                      | 106.7                     | 111.9                      | 115.5                     |                             |                        | 114.9 | 111.1   |
| N.C.Syn.B(51)7                 | 118.4                      | 102.6                   | 113.4                    | 99.4                 | 102.6                     | 99.4                       | 101.8                     | 98.9                        | 111.1                  | 105.3 | 104.9   |
| N.C.Syn.D(51)10                | 116.1                      | 99.9                    | 116.5                    |                      | 103.6                     | 103.9                      | 111.7                     |                             | 105.0                  | 108.1 | 108.1   |
| N.C.Syn.D(51)12                | 111.5                      | 115.1                   | 115.1                    | 99.9                 | 107.1                     | 99.1                       | 109.2                     |                             | 106.8                  | 108.0 | 111.8   |
| N.C.M.S.A.(55)                 |                            | 106.9                   | 108.9                    |                      |                           |                            |                           |                             |                        | 107.9 | 103.8   |
| N.C.M.S.B.(55)                 |                            | 110.8                   | 120.0                    |                      |                           |                            |                           |                             |                        | 115.4 | 120.2   |

<sup>1/</sup> Checks-Average of Atlantic, Buffalo and Williamsburg. 1957 was a dry season at certain locations. At Salisbury, for example, the yield represents harvests obtained prior to July 15.



Table 2. Continued

| Variety                        | Locations                  |                         |                          |                      |                           |                            |                           |                             | Average                |         |
|--------------------------------|----------------------------|-------------------------|--------------------------|----------------------|---------------------------|----------------------------|---------------------------|-----------------------------|------------------------|---------|
|                                | Waynesville, N.C. (3 cuts) | Rocky Mt. N.C. (4 cuts) | Salisbury, N.C. (3 cuts) | Athens, Ga. (6 cuts) | Woodford Co. Ky. (3 cuts) | Princeton Co. Ky. (3 cuts) | Blount Co. Tenn. (3 cuts) | Fayetteville, Ark. (5 cuts) | Osceola, Ark. (5 cuts) | Average |
| A-223                          |                            |                         |                          |                      |                           |                            |                           | 95.0                        | 95.0                   | 80.5    |
| A-227                          |                            |                         |                          |                      |                           |                            |                           | 109.6                       | 109.6                  | 87.8    |
| Italy (016S5)                  |                            |                         |                          |                      |                           |                            |                           | 86.9                        | 86.9                   | 89.9    |
| Hairy Peruvian                 |                            |                         |                          |                      |                           |                            |                           | 99.0                        | 99.0                   | 91.5    |
|                                |                            |                         |                          |                      |                           |                            |                           |                             |                        | 88.9    |
| Ariz. Chilean                  |                            |                         |                          |                      |                           |                            |                           | 103.0                       | 103.0                  | 86.2    |
| Argentine                      |                            |                         |                          |                      |                           |                            |                           | 96.8                        | 96.8                   | 80.6    |
| Indian                         |                            | 98.9                    |                          | 97.8                 |                           |                            |                           |                             |                        | 97.9    |
| Chilean                        |                            | 82.7                    |                          | 94.7                 |                           |                            |                           |                             |                        | 92.7    |
| African                        |                            | 72.2                    |                          |                      |                           |                            |                           |                             |                        |         |
| Pilca Butta                    |                            | 82.3                    |                          |                      |                           |                            |                           |                             |                        | 72.2    |
| Talent                         |                            | 72.2                    |                          |                      |                           |                            |                           |                             |                        | 114.0   |
| Indiana Syn F                  |                            |                         |                          |                      |                           |                            | 99.8                      | 80.8                        | 90.3                   | 93.1    |
| Socheville                     |                            |                         |                          |                      |                           |                            | 110.9                     | 110.9                       | 110.9                  | 107.0   |
| Rambler                        | 78.8                       |                         |                          |                      |                           |                            |                           |                             |                        | 72.2    |
| Canadian Se. Ma 531            |                            |                         |                          |                      |                           |                            |                           | 83.7                        | 83.7                   | 105.4   |
| New Mexico 11-1                |                            |                         |                          |                      |                           |                            |                           | 89.0                        | 89.0                   | 88.8    |
|                                |                            |                         |                          |                      |                           |                            |                           |                             |                        | 90.3    |
|                                |                            |                         |                          |                      |                           |                            |                           |                             |                        | 110.9   |
|                                |                            |                         |                          |                      |                           |                            |                           |                             |                        | 78.8    |
|                                |                            |                         |                          |                      |                           |                            |                           |                             |                        | 83.7    |
|                                |                            |                         |                          |                      |                           |                            |                           |                             |                        | 89.0    |
| Actual yield of checks (ton/A) |                            |                         |                          |                      |                           |                            |                           |                             |                        |         |
| Atlantic                       | 2.25                       | 2.59                    | 2.77                     | 2.97                 | 3.11                      | 4.12                       | 2.44                      | 2.36                        | 6.35                   |         |
| Buffalo                        | 1.94                       | 2.20                    | 2.69                     | 2.23                 | 2.77                      | 4.19                       | 2.51                      | 2.28                        | 5.90                   |         |
| Williamsburg                   | 2.32                       | 2.90                    | 3.14                     | 3.27                 | 2.75                      | 4.37                       | 2.50                      | 2.64                        | 6.63                   |         |
| Av. of checks                  | 2.17                       | 2.56                    | 2.87                     | 2.82                 | 2.88                      | 4.26                       | 2.48                      | 2.43                        | 6.29                   |         |
| L.S.D..05 in% of checks        | .13                        | .19                     | .11                      | n.s.                 | .11                       | n.s.                       | .14                       | .26                         | .10                    |         |
| L.S.D..01 in % of checks       | .18                        | .24                     | .15                      |                      | n.s.                      | n.s.                       | n.s.                      | n.s.                        | n.s.                   |         |
| C.V. (&)                       | 8                          | 13                      | 7                        |                      | 12                        | 12                         | 13                        | 14                          | 7                      |         |

NOT FOR PUBLICATION

## CONNECTICUT - Storrs Agricultural Experiment Station

Table 3. Alfalfa Variety Test - Seeded August 1951 (Data are av. of quadruplicated plots)

| Variety                 | Wilt (%) |       | Stands (%) |      | Total Dry Matter *<br>(cwts./acre) |      | Av. 6<br>Years |
|-------------------------|----------|-------|------------|------|------------------------------------|------|----------------|
|                         | 1954     | 1955  | 1956       | 1957 | 1956                               | 1957 |                |
|                         |          |       |            |      |                                    |      |                |
| Buffalo                 | 2        | 13    | 10         | 18   | 36                                 | 27   | 49             |
| Ranger                  | 4        | 8     | 24         | 25   | 40                                 | 40   | 55             |
| Narragansett            | 40       | 29    | 3          | 6    | 30                                 | 21   | 49             |
| Atlantic                | 21       | 33    | 8          | 8    | 34                                 | 27   | 51             |
| 07E-C223                | 3        | 2     | 31         | 30   | 53                                 | 46   | 67             |
| 07E-C199                | 5        | 6     | 35         | 43   | 45                                 | 50   | 62             |
| 07E-C197                | 4        | 6     | 27         | 33   | 46                                 | 48   | 56             |
| 07E-C195                | 4        | 3     | 28         | 36   | 53                                 | 49   | 62             |
| 07E-C191                | 2        | 2     | 42         | 56   | 52                                 | 60   | 62             |
| 07E-C190                | 1        | 3     | 40         | 44   | 53                                 | 54   | 64             |
| 07E-C188                | 0        | 2     | 44         | 54   | 52                                 | 58   | 65             |
| 07E-C187                | 1        | 5     | 34         | 45   | 49                                 | 48   | 61             |
| 07E-C184                | 3        | 9     | 29         | 33   | 47                                 | 53   | 58             |
| 07E-C183                | trace    | 5     | 24         | 35   | 55                                 | 50   | 64             |
| 07E-C180                | 11       | 17    | 12         | 18   | 40                                 | 38   | 51             |
| 07E-C144                | 2        | 3     | 17         | 29   | 44                                 | 44   | 60             |
| 07E-C130                | 4        | trace | 48         | 54   | 56                                 | 59   | 68             |
| 07E-C79                 | 5        | 3     | 39         | 48   | 45                                 | 56   | 62             |
| 07E-C57                 | 0        | 2     | 44         | 53   | 52                                 | 56   | 65             |
| 07E-C54                 | 1        | 4     | 33         | 36   | 48                                 | 54   | 62             |
| Chilean (Arizona)-23669 | 35       | 49    | 4          | 3    | 33                                 | 25   | 46             |
| Buffalo - 24190         | 8        | 11    | 19         | 24   | 39                                 | 44   | 57             |
| Du Puits - 24105        | 53       | 63    | 5          | 0    | 20                                 | 23   | 46             |
| Common (Kansas) - 24072 | 13       | 19    | 5          | 8    | 32                                 | 27   | 52             |
| Nomad - 24044           | 48       | 23    | 6          | 8    | 39                                 | 29   | 52             |
| Ranger - 24189          | 3        | 17    | 25         | 26   | 39                                 | 39   | 52             |
| Talent - 24026          | 50       | 53    | 2          | 4    | 26                                 | 20   | 43             |
| Williamsburg - 24152    | 16       | 31    | 5          | 7    | 32                                 | 30   | 53             |
| Variegated (commercial) | 65       | 49    | 2          | 1    | 30                                 | 21   | 45             |
| Grimm (commercial)      | 43       | 58    | 1          | 1    | 28                                 | 24   | 44             |

\* Includes volunteer grasses and weeds.

## CONNECTICUT - Storrs Agricultural Experiment Station

Table 4. Alfalfa Variety Tests, 1957. NE-28 (Experiment 1). (Averages of four replicates; planted spring 1956)

| No.     | Entry        | Total Yield in T/A<br>12% Moisture |                      |                 | % Alfalfa<br>7/30 | Total<br>Alfalfa<br>Fraction | % Stand<br>9/9 |
|---------|--------------|------------------------------------|----------------------|-----------------|-------------------|------------------------------|----------------|
|         |              | First<br>Cut<br>6/13               | Second<br>Cut<br>8/1 | Season<br>Yield |                   |                              |                |
|         |              |                                    |                      |                 |                   |                              |                |
| 1       | 57-C10       | 2.47                               | .21                  | 2.68            | 34                | 1.05                         | 64             |
| 2       | 57-C12       | 2.40                               | .21                  | 2.61            | 45                | 1.30                         | 65             |
| 3       | 57-C42       | 2.12                               | .17                  | 2.29            | 31                | .88                          | 51             |
| 4       | 57-C44       | 2.24                               | .21                  | 2.45            | 41                | 1.14                         | 66             |
| 5       | 57-C57       | 2.02                               | .22                  | 2.24            | 33                | .97                          | 54             |
| 6       | 57-C112      | 2.36                               | .16                  | 2.52            | 29                | .88                          | 48             |
| 7       | 57-C188      | 2.07                               | .18                  | 2.25            | 39                | .99                          | 51             |
| 8       | 57-NY49-33   | 2.28                               | .18                  | 2.46            | 31                | .93                          | 50             |
| 9       | 57-NY49-40   | 2.16                               | .15                  | 2.31            | 30                | .86                          | 54             |
| 10      | 57-NY49-55   | 2.41                               | .21                  | 2.62            | 39                | 1.18                         | 69             |
| 11      | 57-NY49-60   | 2.21                               | .16                  | 2.37            | 26                | .74                          | 46             |
| 12      | 57-NY49-72   | 2.43                               | .20                  | 2.63            | 43                | 1.28                         | 61             |
| 13      | Atlantic     | 2.38                               | .23                  | 2.61            | 43                | 1.27                         | 73             |
| 14      | Du Puits     | 2.54                               | .42                  | 2.96            | 66                | 2.11                         | 85             |
| 15      | Narragansett | 2.39                               | .29                  | 2.68            | 49                | 1.47                         | 63             |
| 16      | Vernal       | 2.33                               | .27                  | 2.60            | 49                | 1.41                         | 69             |
| Average |              | 2.30                               | .22                  | 2.52            | 39                | 1.16                         | 61             |
| L.S.D.  | 5%           | N.S.                               | .09                  |                 |                   |                              |                |
|         | 1%           | N.S.                               | .11                  |                 |                   |                              |                |



## CONNECTICUT - Storrs Agricultural Experiment Station

Table 5. Alfalfa Variety Tests, 1957. NE-28 (Experiment 2). (Averages of four replicates; planted spring 1956)

| Total Yield in T/A |              |              |            |                 |                  |                              |                |
|--------------------|--------------|--------------|------------|-----------------|------------------|------------------------------|----------------|
| 12% Moisture       |              |              |            |                 |                  |                              |                |
| No.                | Entry        | First Second |            | Season<br>Yield | %Alfalfa<br>7/30 | Total<br>Alfalfa<br>Fraction | % Stand<br>9/9 |
|                    |              | Cut<br>6/13  | Cut<br>8/1 |                 |                  |                              |                |
| 17                 | 57-C53       | 2.11         | .17        | 2.28            | 56               | 1.37                         | 74             |
| 18                 | 57-C91       | 2.41         | .20        | 2.61            | 44               | 1.28                         | 60             |
| 19                 | 57-C187      | 2.52         | .30        | 2.82            | 58               | 1.73                         | 85             |
| 20                 | 57-C199      | 2.38         | .26        | 2.64            | 51               | 1.49                         | 71             |
| 21                 | 57-C221      | 2.23         | .24        | 2.47            | 54               | 1.48                         | 70             |
| 22                 | 57-NY49-6    | 2.34         | .18        | 2.52            | 51               | 1.40                         | 71             |
| 23                 | 57-NY49-9    | 2.33         | .32        | 2.65            | 61               | 1.74                         | 75             |
| 24                 | 57-NY49-14   | 2.46         | .27        | 2.73            | 54               | 1.61                         | 75             |
| 25                 | 57-NY49-18   | 2.21         | .21        | 2.42            | 48               | 1.29                         | 76             |
| 26                 | 57-NY49-19   | 2.39         | .27        | 2.66            | 61               | 1.74                         | 78             |
| 27                 | 57-NY49-57   | 2.47         | .18        | 2.65            | 36               | 1.08                         | 59             |
| 28                 | 57-NY49-75   | 2.11         | .22        | 2.33            | 50               | 1.29                         | 65             |
| 29                 | 57-Pa 4      | 2.31         | .21        | 2.52            | 48               | 1.33                         | 74             |
| 13                 | Atlantic     | 2.13         | .22        | 2.35            | 53               | 1.33                         | 81             |
| 14                 | Du Puits     | 2.40         | .34        | 2.74            | 63               | 1.85                         | 83             |
| 15                 | Narragansett | 2.45         | .26        | 2.71            | 63               | 1.80                         | 80             |
| 16                 | Vernal       | 2.46         | .24        | 2.70            | 58               | 1.65                         | 78             |
| Average            |              | 2.34         | .24        | 2.58            | 50               | 1.50                         | 74             |
| L.S.D. 5%          |              | N.S.         | .07        |                 |                  |                              |                |
| 1%                 |              | N.S.         | .10        |                 |                  |                              |                |

## CONNECTICUT - Storrs Agricultural Experiment Station

Table 6. Alfalfa Variety Tests, 1957. NE-28 (Experiment 4). (Averages of four replicates; planted spring 1956).

| Total Yield in T/A |               |       |        |        |           |          |         |
|--------------------|---------------|-------|--------|--------|-----------|----------|---------|
| 12% Moisture       |               |       |        |        |           |          |         |
| No.                | Entry         | First | Second | Season | % Alfalfa | Total    | % Stand |
|                    |               | Cut   | Cut    |        |           | Alfalfa  |         |
|                    |               | 6/14  | 8/5    | Yield  | 7/30      | Fraction | 9/9     |
| 36                 | Indian Syn. F | 2.45  | .27    | 2.72   | 59        | 1.71     | 80      |
| 37                 | N.Y. A        | 2.66  | .37    | 3.03   | 66        | 2.13     | 88      |
| 38                 | N.Y. B        | 2.54  | .29    | 2.83   | 64        | 1.92     | 89      |
| 39                 | N.Y. C        | 2.35  | .36    | 2.71   | 63        | 1.84     | 84      |
| 40                 | Syn. A-242    | 2.51  | .23    | 2.74   | 59        | 1.71     | 79      |
| 41                 | Buffalo       | 2.05  | .31    | 2.36   | 55        | 1.44     | 83      |
| 42                 | Williamsburg  | 2.22  | .34    | 2.56   | 61        | 1.70     | 88      |
| 43                 | Lahontan      | 1.89  | .20    | 2.09   | 43        | 1.00     | 70      |
| 44                 | Ranger        | 2.24  | .33    | 2.57   | 61        | 1.70     | 83      |
| 13                 | Atlantic      | 2.36  | .31    | 2.67   | 64        | 1.81     | 90      |
| 14                 | Du Puits      | 2.65  | .37    | 3.02   | 71        | 2.26     | 90      |
| 15                 | Narragansett  | 2.61  | .44    | 3.05   | 70        | 2.28     | 90      |
| 16                 | Vernal        | 2.54  | .35    | 2.89   | 59        | 1.85     | 89      |
| 45                 | Syn. A-239    | 2.62  | .31    | 2.93   | 61        | 1.91     | 85      |
| 46                 | Syn. A-233    | 2.53  | .27    | 2.80   | 61        | 1.82     | 80      |
| 47                 | Syn. A-235    | 2.48  | .28    | 2.76   | 63        | 1.83     | 81      |
| 48                 | Syn. A-241    | 2.59  | .24    | 2.83   | 61        | 1.83     | 84      |
|                    |               |       |        |        |           |          |         |
|                    | Average       | 2.43  | .31    | 2.74   | 61        | 1.81     | 84      |
|                    | L.S.D. 5%     | .24   | .08    |        |           |          |         |
|                    | 1%            | .32   | .11    |        |           |          |         |

## CONNECTICUT - Storrs

Table 7. Summary of Data on Spaced Alfalfa Plants - 1957. Planted in field Spring 1956.  
(Averages of four replicates)

| Strain            | (Averages of four replicates)         |      |                     |     |                                |                     |     |                            |      |     |    | Stems 7/17    |                                       |
|-------------------|---------------------------------------|------|---------------------|-----|--------------------------------|---------------------|-----|----------------------------|------|-----|----|---------------|---------------------------------------|
|                   | Erectness (1-10) <sup>1/</sup>        |      |                     |     | Leafiness (1-10) <sup>1/</sup> |                     |     | Vigor (1-10) <sup>1/</sup> |      |     |    | Ht.<br>(Ins.) | Fine-<br>ness<br>(1-10) <sup>1/</sup> |
|                   | 7/17                                  | 9/11 | 11/12 <sup>2/</sup> | Av. | 7/17                           | 11/12 <sup>2/</sup> | Av. | 7/17                       | 9/11 | Av. |    |               |                                       |
| C196              | 8                                     | 7    | 5                   | 7   | 5                              | 5                   | 5   | 6                          | 8    | 7   | 16 | 6             |                                       |
| 51A 516,9-15 (7)  | 3                                     | 4    | 4                   | 4   | 10                             | 6                   | 8   | 5                          | 4    | 5   | 7  | 10            |                                       |
| C91               | 9                                     | 6    | 7                   | 7   | 7                              | 4                   | 6   | 7                          | 7    | 7   | 16 | 6             |                                       |
| NY 49-9           | 8                                     | 6    | 7                   | 7   | 7                              | 1                   | 4   | 8                          | 9    | 9   | 17 | 6             |                                       |
| 51A 503,7-7 (6)   | 5                                     | 4    | 3                   | 4   | 8                              | 3                   | 6   | 5                          | 5    | 5   | 10 | 8             |                                       |
| C57               | 9                                     | 5    | 5                   | 6   | 7                              | 3                   | 5   | 5                          | 6    | 6   | 13 | 9             |                                       |
| G221              | 6                                     | 4    | 4                   | 5   | 7                              | 5                   | 6   | 6                          | 6    | 6   | 13 | 6             |                                       |
| 51A 511,7-12 (7)  | 6                                     | 5    | 6                   | 6   | 7                              | 3                   | 5   | 8                          | 6    | 7   | 14 | 6             |                                       |
| NY 49-33          | 9                                     | 7    | 8                   | 8   | 6                              | 4                   | 5   | 6                          | 7    | 7   | 15 | 6             |                                       |
| C188              | 7                                     | 6    | 5                   | 6   | 7                              | 3                   | 5   | 8                          | 8    | 8   | 16 | 5             |                                       |
| C112              | 9                                     | 7    | 8                   | 8   | 7                              | 1                   | 4   | 8                          | 8    | 8   | 18 | 5             |                                       |
| C10               | 8                                     | 6    | 5                   | 6   | 9                              | 6                   | 8   | 7                          | 7    | 7   | 15 | 7             |                                       |
| C44               | 5                                     | 4    | 4                   | 4   | 7                              | 5                   | 6   | 5                          | 5    | 5   | 11 | 9             |                                       |
| 51A 505,7-15 (2)  | 4                                     | 4    | 2                   | 3   | 9                              | 4                   | 7   | 4                          | 4    | 4   | 7  | 10            |                                       |
| C53               | 4                                     | 5    | 2                   | 4   | 7                              | 9                   | 8   | 7                          | 6    | 7   | 13 | 5             |                                       |
| NY 49-40          | 7                                     | 6    | 5                   | 6   | 6                              | 5                   | 6   | 6                          | 7    | 7   | 15 | 8             |                                       |
| 27- C191          | 8                                     | 7    | 6                   | 7   | 8                              | 6                   | 7   | 9                          | 9    | 9   | 18 | 5             |                                       |
| 14-C79            | Not planted - weak and mosaic foliage |      |                     |     |                                |                     |     |                            |      |     |    |               |                                       |
| NY 49-55          | 8                                     | 6    | 5                   | 6   | 6                              | 6                   | 6   | 9                          | 10   | 10  | 14 | 5             |                                       |
| NY 49-75          | 8                                     | 7    | 7                   | 7   | 8                              | 5                   | 7   | 9                          | 9    | 9   | 19 | 4             |                                       |
| C187              | 7                                     | 6    | 4                   | 6   | 6                              | 4                   | 5   | 7                          | 8    | 8   | 14 | 6             |                                       |
| 51A 542,11-5 (10) | 4                                     | 4    | 2                   | 3   | 7                              | 7                   | 7   | 5                          | 5    | 5   | 8  | 10            |                                       |
| NY 49-19          | 8                                     | 7    | 5                   | 7   | 6                              | 2                   | 4   | 8                          | 8    | 8   | 18 | 5             |                                       |
| NY 49-60          | 9                                     | 8    | 9                   | 9   | 8                              | 2                   | 5   | 9                          | 9    | 9   | 20 | 5             |                                       |
| NY 49-14          | 9                                     | 7    | 6                   | 7   | 9                              | 4                   | 7   | 10                         | 10   | 10  | 19 | 5             |                                       |
| C12               | 8                                     | 8    | 7                   | 8   | 8                              | 5                   | 7   | 6                          | 7    | 7   | 13 | 6             |                                       |
| NY 49-18          | 8                                     | 7    | 5                   | 7   | 6                              | 2                   | 4   | 8                          | 9    | 9   | 19 | 6             |                                       |
| NY 49-72          | 7                                     | 8    | 8                   | 8   | 7                              | 5                   | 6   | 8                          | 9    | 9   | 16 | 6             |                                       |
| C42               | 9                                     | 9    | 7                   | 8   | 7                              | 3                   | 5   | 7                          | 7    | 7   | 16 | 5             |                                       |
| NY 49-57          | 8                                     | 8    | 6                   | 7   | 6                              | 3                   | 5   | 8                          | 8    | 8   | 17 | 5             |                                       |
| C199              | 7                                     | 8    | 7                   | 7   | 4                              | 3                   | 4   | 7                          | 7    | 7   | 16 | 5             |                                       |
| NY 49-6           | 5                                     | 5    | 4                   | 5   | 8                              | 5                   | 7   | 3                          | 4    | 4   | 8  | 9             |                                       |
| 51A-504,7-9 (7)   | 5                                     | 3    | 2                   | 3   | 10                             | 5                   | 8   | 4                          | 5    | 5   | 7  | 10            |                                       |
| 51A-524,7-8 (7)   | 7                                     | 7    | 8                   | 7   | 6                              | 5                   | 6   | 7                          | 6    | 7   | 16 | 6             |                                       |
| 51A-513,7-16 (10) | 4                                     | 3    | 1                   | 3   | 8                              | 3                   | 6   | 4                          | 4    | 4   | 8  | 10            |                                       |

<sup>1/</sup> For index scores 1 = the least desirable and 10 = the most desirable for the character in question.

<sup>2/</sup> After several freezes.

Table 7. (Continued)

| Leaves<br>(color)<br>(1-10) | Blossoms       |             | Color* |      | Number of<br>Plants |      | Yields Hay (12% M)<br>(tons/acre) |      |       | Remarks                       |
|-----------------------------|----------------|-------------|--------|------|---------------------|------|-----------------------------------|------|-------|-------------------------------|
|                             | 7/17<br>(1-10) | 9/11<br>(%) | 7/17   | 9/11 | 7/17                | 9/11 | 6/19                              | 8/5  | Total |                               |
| 7                           | 1.5            | 4           | DP     | P    | 2.7                 | 2.7  | 1.44                              | 0.54 | 1.98  | Mosaic on 2 plants+ 1 wilt    |
| 5                           | 0.3            | 1           | VDP    | -    | 3.0                 | 3.0  | 1.28                              | 0.38 | 1.66  |                               |
| 9                           | 6.8            | 5           | VDP    | VDP  | 2.7                 | 2.7  | 0.85                              | 0.45 | 1.30  |                               |
| 8                           | 3.3            | 20          | P      | P    | 2.5                 | 2.5  | 1.00                              | 0.63 | 1.63  |                               |
| 5                           | 0.0            | 0           | -      | -    | 2.7                 | 2.7  | 0.99                              | 0.32 | 1.31  |                               |
| 4                           | 0.8            | 0           | DP     | -    | 3.0                 | 3.0  | 0.87                              | 0.45 | 1.32  | "Stemmy"                      |
| 7                           | 0.0            | 0           | -      | -    | 2.7                 | 2.7  | 1.53                              | 0.37 | 1.90  |                               |
| 8                           | 1.0            | 1           | VDP    | -    | 3.0                 | 3.0  | 2.04                              | 0.71 | 2.75  |                               |
| 8                           | 1.0            | 0           | P      | -    | 2.7                 | 2.7  | 0.70                              | 0.37 | 1.07  | Mosaic on 2 plants            |
| 7                           | 3.5            | 2           | P      | P    | 3.0                 | 3.0  | 1.49                              | 0.76 | 2.25  | Mosaic on 6 plants            |
| 7                           | 2.5            | 2           | P      | -    | 2.7                 | 2.7  | 0.83                              | 0.52 | 1.35  | Mosaic on 1 plant<br>1 "wilt" |
| 6                           | 1.8            | 1           | P      | -    | 3.0                 | 3.0  | 1.40                              | 0.76 | 2.16  |                               |
| 4                           | 1.0            | 0           | DP     | -    | 3.0                 | 3.0  | 0.74                              | 0.22 | 0.96  |                               |
| 4                           | 0.0            | 0           | -      | -    | 3.0                 | 3.0  | 1.37                              | 0.29 | 1.66  |                               |
| 7                           | 0.8            | 0           | P      | -    | 3.0                 | 3.0  | 2.41                              | 0.78 | 3.19  |                               |
| 8                           | 4.0            | 1           | P      | -    | 3.0                 | 3.0  | 0.54                              | 0.28 | 0.82  | Not planted                   |
| 9                           | 3.0            | 4           | DP     | -    | 3.0                 | 3.0  | 2.07                              | 0.97 | 3.04  |                               |
| 7                           | 0.5            | 0           | -      | -    | 3.0                 | 3.0  | 1.80                              | 0.81 | 2.61  |                               |
| 8                           | 0.8            | 0           | DB     | VLP  | 2.2                 | 2.2  | 1.50                              | 0.66 | 2.16  |                               |
| 6                           | 1.5            | 1           | LB     | P    | 3.0                 | 3.0  | 1.09                              | 0.63 | 1.72  |                               |
| 4                           | 0.8            | 0           | VDP    | -    | 3.0                 | 3.0  | 2.15                              | 0.48 | 2.63  | 1 plant dif. in 4th rep.      |
| 8                           | 1.8            | 3           | LP     | -    | 2.5                 | 2.5  | 0.78                              | 0.53 | 1.31  |                               |
| 9                           | 1.8            | 1           | DP     | P    | 3.0                 | 2.7  | 1.42                              | 1.05 | 2.47  |                               |
| 8                           | 2.3            | 0           | P      | -    | 3.0                 | 3.0  | 1.47                              | 1.01 | 2.98  |                               |
| 7                           | 4              | 5           | DB     | P    | 3.0                 | 3.0  | 1.87                              | 0.58 | 2.45  |                               |
| 9                           | 4              | 11          | DP     | LP   | 2.5                 | 2.5  | 1.02                              | 0.66 | 1.68  | Mosaic on 3 plants            |
| 7                           | 2              | 3           | LP     | -    | 3.0                 | 3.0  | 1.74                              | 0.82 | 2.56  |                               |
| 6                           | 1              | 3           | LP     | P    | 3.0                 | 3.0  | 1.06                              | 0.48 | 1.54  |                               |
| 8                           | 2              | 2           | DP     | P    | 2.5                 | 2.5  | 1.47                              | 0.62 | 2.09  |                               |
| 8                           | 1              | 0           | LB     | -    | 3.0                 | 3.0  | 1.37                              | 0.52 | 1.89  |                               |
| 4                           | 2              | 0           | LB     | -    | 1.5                 | 1.3  | 0.64                              | 0.21 | 0.85  | Mosaic on 3 plants+ 1 wilt    |
| 4                           | 0              | 0           | VDP    | -    | 3.0                 | 3.0  | 0.91                              | 0.25 | 1.16  |                               |
| 8                           | 4              | 7           | P      | P    | 3.0                 | 3.0  | 1.29                              | 0.64 | 1.93  |                               |
| 4                           | 1              | 0           | DP     | -    | 3.0                 | 3.0  | 0.87                              | 0.33 | 1.20  | 1 wilt                        |
| *B = Blue                   |                |             |        | LSD  | 5%                  |      | 0.66                              | 0.30 |       |                               |
| P = Purple                  |                |             |        |      | 1%                  |      | 0.87                              | 0.40 |       |                               |
| D = Dark                    |                |             |        |      |                     |      |                                   |      |       |                               |
| V = Very                    |                |             |        |      |                     |      |                                   |      |       |                               |

## GEORGIA - Blairsville

Table 8. Summary of Alfalfa Variety Test, 1956-1957

| Variety                    | Yield in pounds of air dry forage |       |         |
|----------------------------|-----------------------------------|-------|---------|
|                            | 1956                              | 1957  | Average |
| FC 32594 Caliverde         | 3053                              | 3803  | 3428    |
| FC 32642 N.C. Syn. A(51)5  | 4990                              | 5188  | 5089    |
| FC 24645 Narragansett      | 5323                              | 4918  | 5121    |
| FC 32645 N.C. Syn. D(51)10 | 5282                              | 4573  | 4928    |
| FC 32567 Oklahoma Common   | 4938                              | 5031  | 4985    |
| FC 36644 Syn. B(51)7       | 5406                              | 5376  | 5391    |
| FC 32570 Lahontan          | 3182                              | 3136  | 3159    |
| FC 24802 Ranger            | 3980                              | 3938  | 3959    |
| FC 24697 Du Puits          | 5646                              | 5927  | 5787    |
| FC 32646 N.C. Syn.D(51)12  | 4543                              | 4594  | 4569    |
| FC 31983 Vernal            | 4584                              | 4344  | 4464    |
| FC 32643 N.C. Syn.B(51)6   | 5376                              | 5094  | 5235    |
| FC 24803 Williamsburg      | 5230                              | 4833  | 5032    |
| FC 24804 Atlantic          | 4938                              | 4688  | 4813    |
| FC 32123 African*          | 604                               | --    | --      |
| FC 32569 Buffalo           | 4824                              | 3927  | 4376    |
| L.S.D. (5%)                | 740                               | 925   |         |
| L.S.D. (1%)                | 1000                              | 1250  |         |
| C.V. (%)                   | 17.21                             | 12.40 |         |

## GEORGIA - Experiment

Table 9. Alfalfa Variety Test, 1957

| Varieties                | Hay yields, pounds per acre, by cuttings and total |         |           |       |      |
|--------------------------|----------------------------------------------------|---------|-----------|-------|------|
|                          | May 20                                             | July 10 | August 22 | Total | Rank |
| FC 32173 - African       | 2420                                               | 2008    | 1742      | 6170  | 15   |
| FC 33492 - Atlantic      | 2581                                               | 1887    | 1452      | 5920  | 16   |
| FC 32984 - Buffalo       | 2581                                               | 2396    | 1742      | 6719  | 11   |
| FC 32594 - Caliverde     | 3064                                               | 2517    | 1597      | 7178  | 9    |
| FC 24821 - Chilean       | 1774                                               | 1791    | 1633      | 5198  | 18   |
| FC 24697 - Du Puits      | 3871                                               | 3339    | 2323      | 9533  | 1    |
| FC 32174 - Indian        | 3065                                               | 1936    | 2396      | 7397  | 6    |
| FC 23143 - Kans. Common  | 2097                                               | 1597    | 1670      | 5364  | 17   |
| FC 33087 - Lahontan      | 3226                                               | 1815    | 1379      | 6420  | 13   |
| FC 32768 - Narragansett  | 3065                                               | 2468    | 2178      | 7711  | 4    |
| FC 33209 - New Mex. 11-1 | 2742                                               | 2589    | 2033      | 7364  | 7    |
| FC 32567 - Okla. Com.    | 2581                                               | 2613    | 2250      | 7444  | 5    |
| FC 33347 - Ranger        | 2742                                               | 2468    | 2033      | 7243  | 8    |
| FC 33346 - Rhizoma       | 2258                                               | 2087    | 1887      | 6232  | 14   |
| FC 22463 - Socheville    | 3710                                               | 2710    | 1996      | 8416  | 2    |
| FC 32139 - Talent        | 2742                                               | 2081    | 1633      | 6456  | 12   |
| FC 31983 - Vernal        | 3387                                               | 2807    | 1742      | 7936  | 3    |
| FC 33204 - Williamsburg  | 2903                                               | 2299    | 1597      | 6799  | 10   |

Note: First cutting, April 3, discarded on account of weeds.

Seeded: October 16, 1956

Plots: 3' x 20'

Replications: 4, Randomized blocks.

Seeding Rate: 30 lbs/A 6 drilled rows, 6" apart.

Fertilizer: 800 lbs/A 4-12-12

Limestone: 2 tons/A

Fertilizer and lime broadcast and harrowed-in prior to seeding.



## GEORGIA - Experiment

Table 10. Notes, Alfalfa Variety Test, 1957.

|               | 1                      | 2      | 3      | 4            | 5        | 6      | 7      |
|---------------|------------------------|--------|--------|--------------|----------|--------|--------|
|               | Winter and fall growth |        |        | Ht. 18       | Frost    | Defol. | Black  |
|               | Ht. of plants on       |        |        | :days after: | injury   | leaf-  | stem   |
| Varieties     | Jan.10                 | Mar.30 | Nov.26 | : mowing     | : Mar.30 | :spot  | :      |
|               | in.                    | in.    | in.    | in.          | (0-10)   | (0-10) | (0-10) |
| African       | 5                      | 12     | 8      | 6            | 4        | 4.25   | 4      |
| Atlantic      | 1.5                    | 7      | 2      | 3            | 0        | 3.25   | 3      |
| Buffalo       | 2                      | 7      | 2      | 5            | 1        | 1.5    | 5      |
| Caliverde     | 3                      | 12     | 4      | 5            | 4        | 3.5    | 4      |
| Chilean 21-5  | 3                      | 10     | 5      | 4            | 4        | 4.25   | 5      |
| Du Puits      | 2                      | 7      | 5      | 6            | 0        | 2.0    | 5      |
| Indian        | 6                      | 15     | 8      | 8            | 6        | 3.5    | 3      |
| Kans. Com.    | 1.5                    | 6      | 3      | 4            | 2        | 2.75   | 5      |
| Lahontan      | 1.5                    | 9      | 1      | 6            | 2        | 2.0    | 10     |
| Narragansett  | 1                      | 6      | 1      | 4            | 0        | 2.5    | 5      |
| New Mex. 11-1 | 3                      | 10     | 5      | 5            | 6        | 3.75   | 4      |
| Okla. Com.    | 2                      | 10     | 3      | 5            | 2        | 2.0    | 4      |
| Ranger        | 2                      | 10     | 2      | 5            | 0        | 1.75   | 7      |
| Rhizoma       | 1                      | 4      | 1      | 4            | 0        | 1.5    | 6      |
| Socheville    | 1.5                    | 10     | 3      | 6            | 1        | 1.25   | 4      |
| Talent        | 4                      | 10     | 5      | 5            | 4        | 2.0    | 6      |
| Vernal        | 1                      | 5      | 2      | 4            | 0        | 1.75   | 4      |
| Williamsburg  | 1.5                    | 6      | 3      | 5            | 4        | 2.25   | 4      |

Columns 1, 2 and 3 shows height of plants, average of 4 replications, on dates indicated.

Column 4 shows height of plants on April 21, following mowing on April 3.

Column 5 gives the amount of frost injury by a low of 28°F on two consecutive nights, March 9 and 10.

Column 6 shows average amount of defoliation, by Pseudopeziza medicaginis (Lib.) Sacc, April 1.

Column 7 shows amount of damage done by Gercospera medicaginis Ell. & Ev. in late summer.

## KENTUCKY - Lexington

Table 11. Alfalfa Variety Trial 1957. Planted February 19, 1954. Randomized Block Design. Four replications. Plots 5' x 25'.

| Variety             | Yield -- Tons dry matter/Acre |                |                |                  |                   |
|---------------------|-------------------------------|----------------|----------------|------------------|-------------------|
|                     | 1955<br>3 cuts                | 1956<br>3 cuts | 1957<br>4 cuts | Total<br>3 years | Yearly<br>Average |
| Orestan             | 2.57                          | 4.52           | 3.99           | 11.08            | 3.69              |
| Pilca Butta         | 1.12                          | 3.32           | 3.35           | 7.79             | 2.60              |
| Vernal              | 3.52                          | 4.61           | 4.29           | 12.42            | 4.14              |
| Atlantic            | 3.38                          | 4.98           | 4.25           | 12.61            | 4.20              |
| Narragansett        | 3.66                          | 4.76           | 4.59           | 13.01            | 4.34              |
| Buffalo             | 3.39                          | 4.73           | 4.62           | 12.74            | 4.25              |
| Nomad               | 0.98                          | 2.89           | 2.29           | 6.16             | 2.05              |
| Caliverde           | 1.49                          | 3.09           | 3.07           | 7.65             | 2.55              |
| Du Puits            | 3.61                          | 5.15           | 5.12           | 13.88            | 4.63              |
| Ranger              | 3.09                          | 4.70           | 4.31           | 12.10            | 4.03              |
| Williamsburg        | 3.20                          | 4.71           | 4.68           | 12.59            | 4.20              |
| Talent              | 1.63                          | 3.84           | 3.53           | 9.00             | 3.00              |
| Rhizoma             | 3.03                          | 4.42           | 4.04           | 11.49            | 3.83              |
| Flamande-Socheville | 3.08                          | 4.63           | 4.55           | 12.26            | 4.09              |
| Sevelra             | 2.12                          | 4.56           | 3.37           | 10.05            | 3.35              |
| Okla. Common        | 3.06                          | 4.87           | 4.60           | 12.53            | 4.18              |
| Ferax               | 2.93                          | 4.42           | 3.88           | 11.23            | 3.74              |
| Calif. Common       | 0.73                          | 3.18           | 2.58           | 6.49             | 2.16              |
| Nemastan            | 1.20                          | 3.31           | 3.20           | 7.71             | 2.57              |
| Kan. Common         | 2.49                          | 4.50           | 4.36           | 11.35            | 3.78              |
| L.S.D. .05          | 0.71                          | 0.98           | 0.61           | 2.15             | 0.72              |
| .01                 | 0.95                          | 1.30           | 0.81           | 2.85             | 0.95              |

## KENTUCKY - LaGrange

Table 12. Alfalfa Variety Trial, 1957. Planted April 23, 1953. Randomized Block Design. Four replications. Plots 10' x 25'.

| Yield -- Tons dry matter/Acre |                |                |                |                |                  |               |
|-------------------------------|----------------|----------------|----------------|----------------|------------------|---------------|
| Variety                       | 1954<br>4 cuts | 1955<br>3 cuts | 1956<br>3 cuts | 1957<br>3 cuts | Total<br>4 years | Yearly<br>Av. |
| Ranger                        | 3.91           | 3.70           | 4.13           | 3.22           | 13.96            | 3.49          |
| Buffalo                       | 2.68           | 3.79           | 4.06           | 2.94           | 13.47            | 3.37          |
| Atlantic                      | 2.90           | 3.75           | 3.98           | 2.86           | 13.49            | 3.37          |
| Williamsburg                  | 2.97           | 3.96           | 3.97           | 3.18           | 14.08            | 3.52          |
| Kan. Common                   | 2.80           | 3.83           | 4.16           | 3.09           | 13.88            | 3.47          |
| Narragansett                  | 3.15           | 3.91           | 4.05           | 3.11           | 14.22            | 3.56          |
| Rhizoma                       | 2.84           | 3.67           | 4.03           | 3.04           | 13.58            | 3.40          |
| Du Puits                      | 3.39           | 3.97           | 4.40           | 3.21           | 14.97            | 3.74          |
| Nomad                         | 2.42           | 3.53           | 3.85           | 2.13           | 11.93            | 2.98          |
| Okla. Common                  | 2.86           | 3.88           | 4.07           | 2.98           | 13.79            | 3.45          |
|                               |                |                |                |                |                  |               |
| L.S.D.                        | .05            | 0.33           | N.S.           | 0.60           | 0.28             | 0.24          |
|                               | .01            | 0.45           | N.S.           | 0.80           | 0.38             | 0.32          |

## KENTUCKY - Princeton and Campbellsville

Table 13. Alfalfa Variety Trial, 1957. Planted Fall of 1955.  
Randomized Block Design. Four Replications. Plots 5' x 25'.

| Variety      | Yield -- Tons Dry Matter/Acre |      |                 |           |      |                 |                          |
|--------------|-------------------------------|------|-----------------|-----------|------|-----------------|--------------------------|
|              | Campbellsville                |      |                 | Princeton |      |                 | Yearly<br>Av.<br>2 Locs. |
|              | 1956                          | 1957 | Total<br>2 yrs. | 1956      | 1957 | Total<br>2 yrs. |                          |
| Buffalo      | 2.79                          | 3.60 | 6.39            | 2.79      | 4.21 | 7.00            | 6.69                     |
| Atlantic     | 3.30                          | 3.31 | 6.61            | 2.89      | 4.19 | 7.08            | 6.84                     |
| Rhizoma      | 2.93                          | 3.47 | 6.40            | 2.93      | 3.47 | 6.40            | 6.40                     |
| Narragansett | 3.04                          | 3.27 | 6.30            | 2.76      | 3.95 | 6.71            | 6.50                     |
| Williamsburg | 2.99                          | 3.50 | 6.49            | 2.63      | 4.40 | 7.03            | 6.76                     |
| Du Puits     | 3.48                          | 3.58 | 7.06            | 3.22      | 4.35 | 7.57            | 7.32                     |
| Vernal       | 3.45                          | 4.02 | 7.46            | 2.95      | 3.87 | 6.82            | 7.14                     |
| Okla. Common | 3.36                          | 3.79 | 7.15            | 2.99      | 4.20 | 7.19            | 7.17                     |
| Ranger       | 3.13                          | 3.47 | 6.59            | 2.36      | 3.63 | 5.99            | 6.29                     |
| L.S.D.       | .05                           | N.S. | N.S.            | N.S.      | 0.39 | 0.70            | 0.52                     |
|              | .01                           | N.S. | N.S.            | N.S.      | 0.54 | 0.95            | 0.70                     |

## KENTUCKY - Woodford County and Princeton

Table 14. Alfalfa Variety Trial, 1957. Plant March 24, 1956. Randomized Block Design. Four Replications. Plots 5' x 25'.

| Variety          | Yield -- tons Dry Matter/Acre |                     |                    |
|------------------|-------------------------------|---------------------|--------------------|
|                  | Woodford Co.<br>3 cuts        | Princeton<br>3 cuts | Average<br>2 Locs. |
| N.C. Syn.A(51)5  | 3.23                          | 4.07                | 3.65               |
| Narragansett     | 3.07                          | 4.47                | 3.77               |
| N.C. Syn.B(51)7  | 2.95                          | 4.20                | 3.57               |
| N.C. Syn.D(51)10 | 2.98                          | 4.39                | 3.68               |
| Williamsburg     | 2.75                          | 4.37                | 3.56               |
| N.C. Syn.B(51)6  | 3.07                          | 4.73                | 3.90               |
| Buffalo          | 2.77                          | 4.19                | 3.48               |
| N.C. Syn.D(51)12 | 3.08                          | 4.19                | 3.63               |
| Vernal           | 3.16                          | 4.02                | 3.59               |
| Du Puits         | 3.32                          | 4.35                | 3.83               |
| Atlantic         | 3.11                          | 4.12                | 3.61               |
| L.S.D. .05       | 0.31                          | N.S.                | N.S.               |
| .01              | N.S.                          | N.S.                | N.S.               |

## KENTUCKY - Princeton

Table 15. Alfalfa Variety Trial, 1957. Planted August 19, 1952.  
 Randomized Block Design. Six Replications. Plots 10' x 52'

| Variety       | Yield -- Tons Dry Matter/Acre |      |      |      |      |       | Av.  |
|---------------|-------------------------------|------|------|------|------|-------|------|
|               | 1953                          | 1954 | 1955 | 1956 | 1957 | Total |      |
| Narragansett  | 0.48                          | 2.77 | 1.40 | 3.44 | 2.14 | 10.23 | 2.05 |
| Atlantic      | 0.51                          | 2.66 | 1.12 | 2.48 | 1.50 | 8.27  | 1.65 |
| Ranger        | 0.40                          | 2.50 | 1.14 | 2.75 | 1.69 | 8.48  | 1.70 |
| Kansas Common | 0.45                          | 2.60 | 1.35 | 2.86 | 1.70 | 8.96  | 1.79 |
| Buffalo       | 0.47                          | 2.74 | 1.35 | 3.17 | 2.04 | 9.77  | 1.95 |
| L.S.D.        | .05                           | 0.07 | N.S. | N.S. | 0.45 | 0.35  |      |
|               | .01                           | ---- | N.S. | N.S. | 0.61 | 0.47  |      |



TENNESSEE - Blount County  
Main Experiment Station (Blount A6)

Table 16. Regional Alfalfa Variety Test, 1957. Yield in Tons of Dry Matter Per Acre (Mean of Four Replications)

| Variety          | 1957  |         |         |         | Season Total | Signif.<br>Groups at<br>P = .05 |
|------------------|-------|---------|---------|---------|--------------|---------------------------------|
|                  | 8 May | 17 June | 25 July | 29 Oct. | Yield        |                                 |
| Du Puits         | 1.051 | 1.356   | .588    | .505    | 3.500        |                                 |
| N.C. Syn.B(51)6  | .806  | .925    | .492    | .648    | 2.870        |                                 |
| N.C. Syn.D(51)10 | .779  | .862    | .475    | .660    | 2.776        |                                 |
| Vernal           | .886  | .826    | .400    | .643    | 2.755        |                                 |
| N.C. Syn.D(51)12 | .766  | .838    | .435    | .676    | 2.715        |                                 |
| Narragansett     | .677  | .918    | .428    | .614    | 2.638        |                                 |
| N.C. Syn.A(51)5  | .836  | .782    | .409    | .609    | 2.636        |                                 |
| N.C. Syn.B(51)7  | .703  | .834    | .362    | .630    | 2.529        |                                 |
| Buffalo          | .738  | .760    | .434    | .578    | 2.510        |                                 |
| Williamsburg     | .605  | .758    | .449    | .690    | 2.502        |                                 |
| Indiana Syn.F    | .764  | .759    | .359    | .598    | 2.480        |                                 |
| Atlantic         | .705  | .710    | .416    | .613    | 2.444        |                                 |
| Lahontan         | .656  | .666    | .362    | .512    | 2.196        |                                 |
| Caliverde        | .572  | .620    | .314    | .529    | 2.035        |                                 |

s = .3416

C.V. = 13.2%

Note: Planted on 24 August 1956 and fertilized at that time with 800 lbs./A of 4-12-4. Top-dressed with 250 lbs./A of 0-20-20 on 3 September 1957.

MARYLAND - College Park

SUMMARY - Eastern Regional Alfalfa Variety Test 1954-57

An Eastern Regional Alfalfa Variety Test was established at College Park, Maryland in 1953 and evaluated for forage production (hay) for four years, 1954-57. At the completion of the 1957 season, plots were variable in regard to stand (stand counts were not made) but were free of weeds.

Socheville, Du Puits and Narragansett continued to yield at a high level, and these three varieties had the highest mean yield of all varieties. Nomad and Talent were consistently low producers. All other varieties were intermediate in respect to these two groups of varieties.

## MARYLAND - College Park

Table 17. Hay yields (tons/acre at 12% moisture) of alfalfa varieties tested in Eastern Regional Alfalfa Test, 1954-57.

| Strain       | Yield |      |      |       | Mean |
|--------------|-------|------|------|-------|------|
|              | 1954  | 1955 | 1956 | 1957  |      |
| Sevelra      | 2.86  | 3.74 | 3.39 | 2.98  | 3.24 |
| Williamsburg | 3.01  | 3.99 | 3.86 | 2.95  | 3.45 |
| Du Puits     | 3.51  | 3.87 | 4.06 | 3.16  | 3.65 |
| Vernal       | 3.36  | 3.58 | 3.47 | 2.85  | 3.31 |
| Nomad        | 2.79  | 3.35 | 2.94 | 2.58  | 2.92 |
| Narragansett | 3.55  | 3.75 | 3.97 | 3.24  | 3.63 |
| Talent       | 2.94  | 3.23 | 3.33 | 2.58  | 3.02 |
| Buffalo      | 2.98  | 3.46 | 3.67 | 2.88  | 3.25 |
| Atlantic     | 3.40  | 3.96 | 3.65 | 2.79  | 3.45 |
| Rhizoma      | 3.27  | 3.70 | 3.66 | 2.83  | 3.37 |
| Grimm        | 3.13  | 3.68 | 3.66 | 3.07  | 3.38 |
| A224         | 2.95  | 3.45 | 3.41 | 2.87  | 3.17 |
| A225         | 3.24  | 3.71 | 3.76 | 2.98  | 3.43 |
| Ranger       | 3.22  | 3.60 | 3.35 | 2.74  | 3.23 |
| Socheville   | 3.39  | 4.05 | 4.27 | 3.41  | 3.78 |
| Mean         | 3.17  | 3.67 | 3.63 | 2.93  | 3.35 |
| L.S.D. .05   | 0.44  | 0.36 | 0.33 | 0.38  | 0.28 |
| L.S.D. .01   | 0.59  | 0.47 | 0.43 | 0.50  | 0.38 |
| C.V.         | 12.1% | 8.4% | 7.8% | 11.2% | 9.1% |

Plot size - 4.5' x 20' (34" x 17'2" harvested)

Seeded - August 19, 1953 - broadcast

6 replications, R.C.B.

3 cuttings each year

## MARYLAND - Beltsville

Table 18. 1954 Clonal Nursery. 3 replications, 7 plants per plot, 9 plots per row, 34" between rows. Transplanted May 11, 1954 in field SB 1. 1957 data

| Entry           | No. | Orig. | Spring 1957:<br>Orig. in % of<br>Orig. | Fall 1957:<br>in % of<br>Orig. | Vigor <sup>1</sup> /<br>May 9, 1957 | Green <sup>2</sup> /<br>Color <sup>2</sup> | Yellow <sup>3</sup> /<br>causes | Yellow <sup>3</sup> /<br>all |
|-----------------|-----|-------|----------------------------------------|--------------------------------|-------------------------------------|--------------------------------------------|---------------------------------|------------------------------|
| C10             | 21  | 48    | 48                                     | 4.7                            | 4.0                                 | 5.3                                        | 8.7                             |                              |
| C12             | 14  | 64    | 43                                     | 4.5                            | 3.0                                 | 3.0                                        | 8.5                             |                              |
| C42             | 11  | 82    | 55                                     | 6.0                            | 5.0                                 | 3.0                                        | 5.0                             |                              |
| C53             | 16  | 100   | 94                                     | 3.3                            | 2.3                                 | 2.0                                        | 6.7                             |                              |
| C91             | 20  | 85    | 75                                     | 6.0                            | 3.7                                 | 3.0                                        | 8.7                             |                              |
| C112            | 15  | 90    | 53                                     | 3.7                            | 3.0                                 | 4.3                                        | 8.7                             |                              |
| C188            | 17  | 59    | 53                                     | 4.7                            | 3.3                                 | 4.7                                        | 7.7                             |                              |
| C199            | 10  | 40    | 40                                     | 5.0                            | 5.0                                 | 2.0                                        | 6.0                             |                              |
| C221            | 8   | 75    | 50                                     | 5.5                            | 3.0                                 | 2.0                                        | 5.0                             |                              |
| C300            | 2   | 50    | 50                                     | 5.0                            | 2.0                                 | 2.0                                        | 9.0                             |                              |
| C302            | 14  | 100   | 100                                    | 3.3                            | 2.0                                 | 2.0                                        | 7.3                             |                              |
| C304            | 10  | 80    | 80                                     | 5.3                            | 2.7                                 | 5.3                                        | 8.3                             |                              |
| C305            | 19  | 79    | 79                                     | 5.3                            | 2.7                                 | 2.7                                        | 7.0                             |                              |
| C307            | 12  | 100   | 100                                    | 3.5                            | 3.5                                 | 4.0                                        | 7.0                             |                              |
| C308            | 16  | 75    | 56                                     | 3.7                            | 4.7                                 | 2.7                                        | 8.3                             |                              |
| C309            | 6   | 83    | 83                                     | 6.0                            | 3.0                                 | 2.0                                        | 4.0                             |                              |
| C310            | 12  | 75    | 50                                     | 6.0                            | 2.0                                 | 4.5                                        | 8.5                             |                              |
| C311            | 10  | 100   | 50                                     | 5.0                            | 3.0                                 | 5.0                                        | 8.0                             |                              |
| C312            | 2   | 100   | 100                                    | 6.0                            | 2.0                                 | 5.0                                        | 8.0                             |                              |
| C/S 62          | 17  | 82    | 76                                     | 4.3                            | 2.3                                 | 4.0                                        | 7.7                             |                              |
| Beltsville 142  | 19  | 100   | 95                                     | 3.0                            | 2.0                                 | 2.7                                        | 8.0                             |                              |
| " 230           | 12  | 100   | 83                                     | 5.7                            | 4.7                                 | 3.7                                        | 8.0                             |                              |
| " 307           | 12  | 100   | 100                                    | 3.3                            | 1.7                                 | 3.0                                        | 8.0                             |                              |
| " 313           | 21  | 100   | 86                                     | 5.3                            | 3.0                                 | 2.0                                        | 5.3                             |                              |
| " 322           | 20  | 80    | 70                                     | 3.3                            | 2.0                                 | 3.3                                        | 7.3                             |                              |
| Beltsville 338  | 17  | 76    | 76                                     | 4.3                            | 1.7                                 | 2.0                                        | 5.3                             |                              |
| " 339           | 13  | 85    | 77                                     | 4.3                            | 3.7                                 | 2.0                                        | 7.0                             |                              |
| " 344           | 21  | 67    | 57                                     | 4.0                            | 2.3                                 | 3.3                                        | 6.0                             |                              |
| " 349           | 7   | 14    | 14                                     | 4.0                            | 4.0                                 | 4.0                                        | 7.0                             |                              |
| " 417           | 17  | --    | --                                     | ---                            | ---                                 | ---                                        | ---                             |                              |
| Nebr. 1917      | 17  | 82    | 82                                     | 3.7                            | 2.3                                 | 4.3                                        | 7.7                             |                              |
| C317            | 20  | 85    | 85                                     | 5.0                            | 5.0                                 | 3.3                                        | 2.0                             |                              |
| 51A-516-7-15(5) | 19  | 53    | 42                                     | 5.7                            | 4.7                                 | 2.0                                        | 3.3                             |                              |
| C313            | 12  | 92    | 83                                     | 5.3                            | 3.7                                 | 1.7                                        | 2.7                             |                              |
| 51A-524-7-8(7)  | 17  | 76    | 47                                     | 5.3                            | 3.0                                 | 2.0                                        | 6.0                             |                              |

<sup>1</sup>/ 1 = most and 9 = least vigorous<sup>2</sup>/ 1 = dark and 9 = light green color<sup>3</sup>/ 1 = least and 9 = most yellowing

Continued

Table 18. Continued

| Entry           | No. | Orig. | Spring 1957 | Fall 1957 | in % of | Vigor <sub>1</sub> /Green <sub>3</sub> | ing <sub>3</sub> /all | ing all |
|-----------------|-----|-------|-------------|-----------|---------|----------------------------------------|-----------------------|---------|
|                 |     |       | Plants      | % of      | Orig.   | May 9, Color <sub>2</sub>              | causes                | causes  |
|                 |     |       |             |           | 1957    | 5-28-57                                | 5-28-57               | 7-11-57 |
| 51A-505-7-15(2) | 7   | 100   | 100         | 4.5       | 4.5     | 2.0                                    | 2.5                   |         |
| C314            | 13  | 23    | 23          | 7.0       | 2.0     | 2.0                                    | 4.0                   |         |
| C316            | 9   | --    | --          | ---       | ---     | ---                                    | ---                   |         |
| C315            | 8   | --    | --          | ---       | ---     | ---                                    | ---                   |         |
| Minn 236        | 15  | 100   | 73          | 4.0       | 2.0     | 3.0                                    | 5.3                   |         |
| 240             | 17  | 100   | 100         | 5.0       | 2.3     | 3.7                                    | 5.7                   |         |
| 244             | 19  | 68    | 68          | 6.3       | 4.7     | 1.7                                    | 1.7                   |         |
| 246             | 15  | 67    | 33          | 4.0       | 5.0     | 4.0                                    | 6.5                   |         |
| 247             | 17  | 88    | 71          | 5.7       | 5.0     | 2.7                                    | 3.3                   |         |
| Minn 252        | 11  | 18    | 18          | 6.0       | 4.0     | 4.0                                    | 8.0                   |         |
| 262             | 12  | --    | --          | ---       | ---     | ---                                    | ---                   |         |
| 264             | 21  | 76    | 52          | 5.7       | 5.0     | 2.0                                    | 8.0                   |         |
| 265             | 18  | 83    | 72          | 6.7       | 5.0     | 3.7                                    | 6.7                   |         |
| 268             | 20  | 70    | 60          | 5.7       | 5.0     | 4.0                                    | 4.0                   |         |
| Minn 269        | 15  | 67    | 47          | 5.3       | 4.7     | 4.0                                    | 7.7                   |         |
| 275             | 18  | 94    | 94          | 3.3       | 3.7     | 2.7                                    | 8.0                   |         |
| 277             | 20  | 45    | 40          | 4.0       | 5.0     | 3.5                                    | 3.5                   |         |
| 278             | 18  | 72    | 61          | 6.0       | 4.3     | 3.0                                    | 4.3                   |         |
| 281             | 18  | 72    | 56          | 3.3       | 3.0     | 5.7                                    | 7.3                   |         |
| 282             | 16  | 69    | 63          | 4.7       | 3.0     | 2.7                                    | 8.3                   |         |
| Narragansett    | 20  | 50    | 30          | 6.7       | 4.3     | 5.3                                    | 6.7                   |         |
| Ranger          | 18  | 50    | 50          | 3.7       | 3.7     | 3.0                                    | 8.3                   |         |
| Buffalo         | 18  | 61    | 56          | 4.7       | 4.0     | 5.0                                    | 7.3                   |         |



## MARYLAND - Beltsville

Table 19. Pasture Type Alfalfa Nursery. Established in the field during the spring of 1954. Plants spaced 42" apart and clean cultivated during the year of establishment. The nursery area was overseeded with creeping red fescue grass in late summer of 1954. Ground limestone and fertilizer have been applied periodically in accordance with needs for successful growing of alfalfa. Beginning in 1955 management of the nursery area (alfalfa and grass) consisted only of mowing 3 times annually. Summary data reported are for crop year 1957.

| Entry                                    | Number of plants showing                                                             |    |     |     |     |                  |    |   |   |   |
|------------------------------------------|--------------------------------------------------------------------------------------|----|-----|-----|-----|------------------|----|---|---|---|
|                                          | Indicated amount of                                                                  |    |     |     |     | Spread in Inches |    |   |   |   |
|                                          | Less                                                                                 |    |     |     |     | than             |    |   |   |   |
|                                          | 10                                                                                   |    |     |     |     | 30 & above       |    |   |   |   |
|                                          | :Stand :                                                                             | :  | :   | :   | :   | :                | :  | : | : | : |
|                                          | :No. of:in % of:                                                                     | :  | :   | :   | :   | :                | :  | : | : | : |
|                                          | :Plants: Orig.:                                                                      | :  | :   | :   | :   | :                | :  | : | : | : |
|                                          | : Est. : Fall : Vigor : ing : Density :                                              | :  | :   | :   | :   | :                | :  | : | : | : |
|                                          | : 1954 : 1957 : Index <sub>1</sub> / : Index <sub>2</sub> / : Index <sub>3</sub> / : | :  | :   | :   | :   | :                | :  | : | : | : |
| Sc 3504(S) <sup>4</sup> / <sub>1</sub>   | 27                                                                                   | 59 | 7.3 | 4.0 | 6.0 | 26               | 1  | 0 | 0 | 0 |
| Sc 3504(C) <sup>5</sup> / <sub>1</sub>   | 46                                                                                   | 59 | 6.3 | 3.7 | 3.5 | 42               | 3  | 1 | 0 | 0 |
| Sc 3513(S)                               | 32                                                                                   | 75 | 6.5 | 2.3 | 4.7 | 29               | 0  | 1 | 2 | 0 |
| Sc 3513(C)                               | 28                                                                                   | 82 | 6.5 | 3.3 | 3.0 | 27               | 1  | 0 | 0 | 0 |
| Ma 5110(C)                               | 46                                                                                   | 76 | 5.5 | 4.5 | 4.9 | 42               | 1  | 0 | 2 | 0 |
| Sc 34922(C)                              | 44                                                                                   | 75 | 6.3 | 3.5 | 4.9 | 35               | 8  | 0 | 1 | 0 |
| A169 (S)                                 | 46                                                                                   | 76 | 5.0 | 6.5 | 5.0 | 29               | 15 | 0 | 1 | 0 |
| A224 (S)                                 | 19                                                                                   | 95 | 5.1 | 6.5 | --- | 19               | 0  | 0 | 0 | 0 |
| PI 205431(S) <sup>6</sup> / <sub>1</sub> | 26                                                                                   | 69 | 6.8 | 4.4 | 6.0 | 7                | 10 | 9 | 0 | 0 |
| PI 212798(S) <sup>7</sup> / <sub>1</sub> | 41                                                                                   | 66 | 7.5 | 4.6 | --- | 41               | 0  | 0 | 0 | 0 |
| Ladak (S)                                | 26                                                                                   | 69 | 6.2 | 5.9 | 3.8 | 20               | 6  | 0 | 0 | 0 |
| Nomad (S)                                | 37                                                                                   | 84 | 5.5 | 5.8 | 4.0 | 36               | 1  | 0 | 0 | 0 |
| Ranger (S)                               | 40                                                                                   | 98 | 5.7 | 7.9 | --- | 40               | 0  | 0 | 0 | 0 |
| Rhizoma (S)                              | 43                                                                                   | 91 | 5.1 | 6.6 | 4.0 | 20               | 17 | 6 | 0 | 1 |

<sup>1</sup>/<sub>1</sub> = most & 9 = least vigorous

<sup>2</sup>/<sub>1</sub> = least & 9 = most yellowing primarily from leafhopper damage.

<sup>3</sup>/<sub>1</sub> = greatest and 9 = least crown density.

<sup>4</sup>/<sub>(S)</sub> denotes that seed hill planted (42" centers) to the field on 5-11-54 & subsequently thinned to 1 plant per hill.

<sup>5</sup>/<sub>(C)</sub> denotes that rooted cuttings were transplanted to field on 5-11-54. The cuttings were taken from an array of genotypes & rooted in the greenhouse during the winter of 1953-54.

<sup>6</sup>/<sub>PI 205431</sub> is a M. sativa introduction from Turkey.

<sup>7</sup>/<sub>PI 212798</sub> is a diploid M. sativa introduced from Iran.



## MISSISSIPPI - State College

Table 20. Alfalfa variety test. Mean performance in 1957. Average of 8 replications.

| Variety              | Dry weight in lbs./acre |         |         | Season Tot. |
|----------------------|-------------------------|---------|---------|-------------|
|                      | 1st Cut                 | 2nd Cut | 3rd Cut |             |
| Lahontan             | 2206                    | 2085    | 1457    | 5748        |
| Indian               | 2424                    | 2643    | 2450    | 7517        |
| Chillicothe Comp.    | 2140                    | 2441    | 2807    | 7338        |
| African              | 2140                    | 2380    | 1816    | 6336        |
| Du Puits             | 2785                    | 2824    | 2056    | 7665        |
| Atlantic             | 2404                    | 2549    | 2011    | 6964        |
| Williamsburg         | 2436                    | 2489    | 2675    | 7600        |
| Ranger               | 2412                    | 2377    | 1870    | 6659        |
| Okla. Common         | 2508                    | 2703    | 2661    | 7872        |
| Arizona              | 2720                    | 2491    | 2000    | 7211        |
| Vernal               | 2355                    | 2124    | 2553    | 7032        |
| Buffalo              | 2672                    | 2658    | 2113    | 7443        |
| Caliverde            | 2485                    | 2618    | 2049    | 7152        |
| Stoneville Polycross | 1540                    | 1700    | 1315    | 4555        |

NEW YORK

Alfalfa Summary 1954 - 1957

1. Ten years of testing alfalfa under the varied conditions of New York State have indicated the potential which improved varieties of this crop have for increased forage production. Previous concepts of alfalfa as a perennial to be grown successfully only for long term stands on well-drained fertile soils have been modified.
2. Improved varieties have increased the opportunities with alfalfa and have considerably diversified its use.
  - (a) On land possessing the requisites of drainage and fertility for long term stands, Du Puits, especially, now provides an option for intensifying production. In tests, it has given 5-1/2 to 6 tons per season for three-year stands under three cutting management. This is at least 1/2 ton per season more than any of the other available varieties.
  - (b) Testing on sites typical of areas previously considered too poorly drained for successful alfalfa production has showed that the Narragansett variety can be grown successfully in many of these areas if given adequate lime and fertilizer. On this type of land, tests have shown production can be almost doubled by alfalfa mixtures. In comparison with results on better soils, the alfalfa grown is much lower yielding, shorter lived, and requires more judicious management, but it is in this area where better forage is needed most. Narragansett has given the best performance under these critical growing conditions.
  - (c) Neither Narragansett nor Du Puits have resistance to bacterial wilt. Tests and observations indicate that in general this disease is at present a rather minor production factor compared to those which influence stand establishment. For areas where potential long-lived stands are possible or desired, varieties which do have wilt resistance are preferred. As alfalfa acreage increases, the disease may become a greater problem than at present. Vernal and Ranger are both wilt resistant.
3. Considerable evidence is now available on Vernal. It has performed very well and on areas where establishment is not a particular problem, it is a stand off with Narragansett. On the marginal areas it has not performed as well. It should replace Ranger in all areas where a long-lived alfalfa is desired and it is by far the best alternative for Narragansett in the critical production areas.
4. In the marginal areas, drainage is variable and many spots are too wet for alfalfa. Early evidence on tests under these conditions show that mixtures containing Narragansett in combination with Viking or European trefoil do give higher yields and more legume than either of these individually. These mixtures have been particularly promising on the North country heavy clays and high elevation land in the Southern Tier.

Table 21. 1957 data from 1956 alfalfa variety and management trial - Ketola Field. Broadcast seeded May 8, 1956, split plot design; 6 replications; seeding rate - 10#/acre. Main plots - 6 cutting treatments in 6 x 6 latin square; split plots - 6 varieties/

| NEW YORK • Ithaca                                        |                    |      |      |    |     |      |                          |      |     |      |    |    |     |      |
|----------------------------------------------------------|--------------------|------|------|----|-----|------|--------------------------|------|-----|------|----|----|-----|------|
| Cutting Treatment A:                                     |                    |      |      |    |     |      |                          |      |     |      |    |    |     |      |
| 2 cuts; 1st by June 20; last cut mid Aug.                |                    |      |      |    |     |      |                          |      |     |      |    |    |     |      |
| Yield - Tons/Acre                                        |                    |      |      |    |     |      |                          |      |     |      |    |    |     |      |
| 6/26 8/14 Tot. 6/26 8/14 % Legume                        |                    |      |      |    |     |      |                          |      |     |      |    |    |     |      |
| T/A Fraction: 6/10 7/30 9/9 Tot. 6/10 7/30 9/9 T/A Frac. |                    |      |      |    |     |      |                          |      |     |      |    |    |     |      |
| Vernal                                                   | 2.69               | 1.80 | 4.49 | 83 | 97  | 3.98 | 2.86                     | 1.65 | .85 | 5.36 | 71 | 90 | 100 | 4.37 |
| Narragansett                                             | 2.89               | 1.88 | 4.77 | 91 | 100 | 4.51 | 2.74                     | 1.79 | .86 | 5.39 | 83 | 95 |     | 4.83 |
| Ranger                                                   | 2.51               | 1.46 | 3.98 | 66 | 93  | 3.01 | 2.59                     | 1.41 | .79 | 4.79 | 69 | 89 |     | 3.83 |
| Atlantic                                                 | 2.57               | 1.77 | 4.33 | 89 | 99  | 4.04 | 2.64                     | 1.64 | .89 | 5.17 | 88 | 97 |     | 4.80 |
| Du Puits                                                 | 2.60               | 2.09 | 4.68 | 92 | 100 | 4.48 | 2.81                     | 1.87 | .98 | 5.66 | 89 | 98 |     | 5.31 |
| Tourneur #501                                            | 2.64               | 1.91 | 4.55 | 93 | 100 | 4.37 | 2.67                     | 1.72 | .95 | 5.33 | 87 | 98 |     | 4.96 |
| Average                                                  | 2.65               | 1.82 | 4.47 | 85 | 98  | 4.04 | 2.72                     | 1.68 | .89 | 5.28 | 81 | 94 | 100 | 4.67 |
| F - Varieties                                            | 2.19-15.54**5.57** |      |      |    |     |      | 1.12-22.30**5.47**5.42** |      |     |      |    |    |     |      |
| L.S.D. (P = .05)                                         | .26                | .15  | .35  |    |     |      | .29                      | .10  | .08 | .36  |    |    |     |      |
| C.V. (%)                                                 | 8.2                | 7.1  | 6.6  |    |     |      | 9.0                      | 4.9  | 7.9 | 5.7  |    |    |     |      |

NEW YORK • Ithaca

NEW YORK - Ithaca

Table 21. Continued

| Varieties        | Cutting Treatment C:                       |        |          |                                            |     |          | Cutting Treatment D:                       |      |          |                                            |        |                     |
|------------------|--------------------------------------------|--------|----------|--------------------------------------------|-----|----------|--------------------------------------------|------|----------|--------------------------------------------|--------|---------------------|
|                  | 3 cuts; 1st cut June 1-7; last cut Sept 10 |        |          | 3 cuts; 1st cut June 1-7, last cut Sept 20 |     |          | 3 cuts; 1st cut June 1-7, last cut Sept 20 |      |          | 3 cuts; 1st cut June 1-7, last cut Sept 20 |        |                     |
|                  | Yield - Tons/Acre                          |        | % Legume | Yield - Tons/Acre                          |     | % Legume | Yield - Tons/Acre                          |      | % Legume | Yield - Tons/Acre                          |        | % Legume            |
|                  | 6/3                                        | 7/23   | 9/9      | Tot.                                       | 6/3 | 7/23     | 9/9                                        | Tot. | 6/3      | 7/30                                       | 9/20   | 9/20 T/A Frac.      |
| Vernal           | 2.20                                       | 1.65   | 1.00     | 4.85                                       | 91  | 100      | 100                                        | 4.65 | 2.38     | 1.81                                       | .92    | 5.11 83 89 100 4.51 |
| Narragensett     | 2.11                                       | 1.62   | .99      | 4.72                                       | 87  |          |                                            | 4.45 | 2.28     | 1.76                                       | .90    | 4.93 90 90 4.54     |
| Ranger           | 2.00                                       | 1.39   | .87      | 4.26                                       | 77  |          |                                            | 3.80 | 1.85     | 1.47                                       | .80    | 4.12 84 94 3.74     |
| Atlantic         | 2.23                                       | 1.67   | .98      | 4.87                                       | 88  |          |                                            | 4.61 | 2.30     | 1.72                                       | 1.00   | 5.02 82 94 4.50     |
| Du Puits         | 2.30                                       | 1.65   | 1.09     | 5.05                                       | 90  |          |                                            | 4.81 | 2.25     | 1.81                                       | 1.03   | 5.10 96 100 5.00    |
| Tourneur #501    | 2.20                                       | 1.62   | 1.08     | 4.90                                       | 97  |          |                                            | 4.83 | 2.10     | 1.76                                       | .94    | 4.79 95 99 4.68     |
| Average          | 2.17                                       | 1.60   | 1.00     | 4.77                                       | 88  | 100      | 100                                        | 4.51 | 2.19     | 1.72                                       | .93    | 4.85 88 94 100 4.47 |
| F - Varieties    | 2.14                                       | 6.04** | 4.64**   | 6.62**                                     |     |          |                                            |      | 8.07**   | 7.38**                                     | 7.58** | 17.68**             |
| L.S.D. (P = .05) | .21                                        | .12    | .16      | .31                                        |     |          |                                            |      | .20      | .14                                        | .09    | .26                 |
| C.V. (%)         | 8.0                                        | 6.5    | 9.4      | 5.4                                        |     |          |                                            |      | 7.6      | 6.6                                        | 7.8    | 4.5                 |



Table 21. Continued

| Varieties        | Cutting Treatment E:                       |        |         |         |                   | Cutting Treatment F:                     |      |      |      |                   | NEW YORK - Ithaca |         |        |        |           |
|------------------|--------------------------------------------|--------|---------|---------|-------------------|------------------------------------------|------|------|------|-------------------|-------------------|---------|--------|--------|-----------|
|                  | 3 cuts; 1st cut June 1-7, last cut Sept 30 |        |         |         |                   | 4 cuts; 1st cut May 25, last cut Oct. 10 |      |      |      |                   |                   |         |        |        |           |
|                  | Yield - Tons/Acre                          |        |         |         |                   | Yield - Tons/Acre                        |      |      |      |                   | % Legume2/ Legume |         |        |        |           |
|                  | 6/3                                        | 8/7    | 9/30    | Tot.    | % Legume2/ Legume | 6/3                                      | 8/7  | 9/30 | Tot. | % Legume2/ Legume | 5/24              | 7/9     | 8/20   | 10/9   | T/A Frac. |
| Vernal           | 2.18                                       | 1.74   | .81     | 4.73    | 86                | 95                                       | 4.34 |      |      |                   | 1.43              | 1.25    | 1.19   | .53    | 4.39      |
| Narragansett     | 2.22                                       | 1.83   | .80     | 4.85    | 86                | 93                                       | 4.41 |      |      |                   | 1.54              | 1.23    | 1.24   | .48    | 4.50      |
| Ranger           | 1.93                                       | 1.50   | .80     | 4.23    | 81                | 95                                       | 3.79 |      |      |                   | 1.36              | 1.00    | 1.02   | .50    | 3.89      |
| Atlantic         | 2.24                                       | 1.69   | .85     | 4.77    | 86                | 94                                       | 4.36 |      |      |                   | 1.45              | 1.20    | 1.18   | .57    | 4.37      |
| Du Puits         | 2.34                                       | 1.86   | 1.01    | 5.20    | 95                | 99                                       | 5.07 |      |      |                   | 1.50              | 1.47    | 1.29   | .74    | 5.00      |
| Tourneur #501    | 2.27                                       | 1.82   | .98     | 5.07    | 93                | 99                                       | 4.89 |      |      |                   | 1.58              | 1.46    | 1.24   | .70    | 4.97      |
| Average          | 2.20                                       | 1.74   | .87     | 4.81    | 88                | 96                                       | 4.48 |      |      |                   | 1.48              | 1.26    | 1.19   | .59    | 4.52      |
| F - Varieties    | 5.72**                                     | 6.49** | 10.06** | 11.06** |                   |                                          |      |      |      |                   | 3.36*             | 20.05** | 6.04** | 31.2** | 24.45**   |
| L.S.D. (P = .05) | .17                                        | .15    | .09     | .30     |                   |                                          |      |      |      |                   | .13               | .12     | .11    | .06    | .25       |
| C.V. (%)         | 6.5                                        | 7.4    | 8.4     | 5.2     |                   |                                          |      |      |      |                   | 7.2               | 7.7     | 7.6    | 7.9    | 4.6       |

- 1/ Excellent stands have been obtained here and it is hoped that information on variety x fall management interaction can be obtained. Previous trials have suggested that the non-fall dormant Flemish types may have a different critical period for fall cutting.
- 2/ The harvests for 9/30 of treatment E, and for 7/9 and 10/9 of treatment F showed 100 percent legume for all varieties.

Table 22. 1957 data from 1956 alfalfa variety trial. Broadcast seeded May 9, 1956 with companion crop of oats; 5 replications. Split - split plot design with 2 fertility levels, 2 associations and 6 varieties. Seeding rates: 10#/acre for alfalfa; 6#/acre for timothy. Management - 3 cuttings per season/

| Yield of 12% Moisture Hay - Tons/Acre                                            |                       |         |                        |        |                 |                       |        |                        |        |                  |                             |        |        |        |         |        |         |         |      |
|----------------------------------------------------------------------------------|-----------------------|---------|------------------------|--------|-----------------|-----------------------|--------|------------------------|--------|------------------|-----------------------------|--------|--------|--------|---------|--------|---------|---------|------|
| Variety                                                                          | Alfalfa Alone         |         |                        |        |                 | Alfalfa & Timothy     |        |                        |        |                  | Av. Prod.all Levels & Assn. |        |        |        |         |        |         |         |      |
|                                                                                  | Low Level Fertility1/ |         | High Level Fertility2/ |        | Av. Total Alone | Low Level Fertility1/ |        | High Level Fertility2/ |        | Av. Total & Tim. |                             |        |        |        |         |        |         |         |      |
|                                                                                  | 6/6                   | 7/26    | 9/6                    | Total  |                 | 6/6                   | 7/26   | 9/6                    | Total  |                  |                             |        |        |        |         |        |         |         |      |
| Du Puits                                                                         | 1.66                  | 1.67    | 1.10                   | 4.43   | 1.54            | 1.64                  | 1.22   | 4.41                   | 4.42   | 1.66             | 1.25                        | .96    | 3.87   | 1.55   | 1.33    | 1.04   | 3.91    | 3.89    | 4.15 |
| Vernal                                                                           | 1.63                  | 1.40    | .86                    | 3.89   | 1.38            | 1.56                  | .93    | 3.88                   | 3.88   | 1.64             | 1.08                        | .70    | 3.42   | 1.44   | 1.05    | .65    | 3.15    | 3.28    | 3.58 |
| Narragansett                                                                     | 1.55                  | 1.62    | .98                    | 4.16   | 1.59            | 1.70                  | 1.01   | 4.30                   | 4.24   | 1.68             | 1.15                        | .80    | 3.63   | 1.50   | 1.04    | .73    | 3.28    | 3.45    | 3.84 |
| Tourneur #501                                                                    | 1.53                  | 1.37    | .93                    | 3.83   | 1.45            | 1.59                  | 1.06   | 4.10                   | 3.96   | 1.63             | 1.11                        | .83    | 3.57   | 1.45   | 1.00    | .79    | 3.24    | 3.40    | 3.68 |
| Ranger                                                                           | 1.37                  | 1.27    | .77                    | 3.42   | 1.28            | 1.15                  | .71    | 3.14                   | 3.28   | 1.57             | .87                         | .61    | 3.05   | 1.35   | .82     | .47    | 2.64    | 2.84    | 3.06 |
| Pennscott R.C.1.81                                                               | 1.87                  | .81     | 4.45                   | 1.55   | 1.70            | .94                   | 4.19   | 4.34                   | 4.34   | 1.88             | 1.57                        | .89    | 4.33   | 1.85   | 1.74    | .93    | 4.52    | 4.42    | 4.38 |
| Average                                                                          | 1.59                  | 1.54    | .91                    | 4.04   | 1.47            | 1.56                  | .98    | 4.00                   | 4.02   | 1.68             | 1.17                        | .80    | 3.65   | 1.52   | 1.16    | .77    | 3.46    | 3.55    | 3.79 |
| F - Varieties                                                                    | 2.56*                 | 17.96** | 15.39**                | 8.95** | 2.01 -          | 4.43**                | 7.63** | 6.32**                 | 6.32** | 3.51*            | 10.79**                     | 9.23** | 6.48** | 6.94** | 13.66** | 8.64** | 13.71** | 13.71** |      |
| L.S.D. (P=.05)                                                                   | .25                   | .16     | .09                    | .45    | --              | .29                   | .10    | .60                    | .60    | .19              | .21                         | .12    | .56    | .19    | .26     | .16    | .59     |         |      |
| C.V. (%)                                                                         | 11.8                  | 7.7     | 7.6                    | 7.5    | 12.7            | 14.0                  | 7.4    | 10.2                   | 10.2   | 8.4              | 13.5                        | 11.6   | 10.4   | 9.7    | 16.9    | 15.3   | 11.5    |         |      |
| Legume Fraction of Hay Harvested                                                 |                       |         |                        |        |                 |                       |        |                        |        |                  |                             |        |        |        |         |        |         |         |      |
| Variety                                                                          | Alfalfa Alone         |         |                        |        |                 | Alfalfa & Timothy     |        |                        |        |                  | Av. Prod.all Levels & Assn. |        |        |        |         |        |         |         |      |
|                                                                                  | Low Level Fertility1/ |         | High Level Fertility2/ |        | Av. Total Alone | Low Level Fertility1/ |        | High Level Fertility2/ |        | Av. Total & Tim. |                             |        |        |        |         |        |         |         |      |
|                                                                                  | 6/6                   | 7/26    | 9/6                    | Total  |                 | 6/6                   | 7/26   | 9/6                    | Total  |                  |                             |        |        |        |         |        |         |         |      |
| Du Puits                                                                         | 1.39                  | 1.54    | 1.10                   | 4.03   | 1.29            | 1.36                  | 1.04   | 3.69                   | 3.66   | .45              | .56                         | .96    | 1.97   | .40    | .59     | .89    | 1.88    | 1.92    | 2.89 |
| Vernal                                                                           | 1.37                  | 1.25    | .84                    | 3.46   | 1.16            | 1.33                  | .45    | 2.94                   | 3.20   | .34              | .33                         | .69    | 1.36   | .17    | .30     | .31    | .78     | 1.07    | 2.13 |
| Narragansett                                                                     | 1.30                  | 1.38    | .95                    | 3.63   | 1.34            | 1.41                  | .65    | 3.40                   | 3.51   | .37              | .47                         | .79    | 1.63   | .21    | .35     | .46    | 1.02    | 1.32    | 2.41 |
| Tourneur #501                                                                    | 1.28                  | .99     | .86                    | 3.13   | 1.22            | 1.26                  | .75    | 3.23                   | 3.18   | .37              | .44                         | .81    | 1.62   | .14    | .30     | .48    | .92     | 1.27    | 2.22 |
| Ranger                                                                           | 1.15                  | 1.07    | .72                    | 2.94   | 1.08            | .77                   | .35    | 2.20                   | 2.57   | .16              | .23                         | .52    | .91    | .07    | .12     | .11    | .30     | .60     | 1.58 |
| Pennscott R.C.1.52                                                               | 1.72                  | .79     | 4.03                   | 1.30   | 1.46            | .72                   | 3.48   | 3.75                   | 3.75   | .79              | .96                         | .88    | 2.63   | .72    | 1.22    | .76    | 2.70    | 2.66    | 3.20 |
| Average                                                                          | 1.34                  | 1.32    | .87                    | 3.53   | 1.23            | 1.26                  | .66    | 3.15                   | 3.34   | .41              | .50                         | .77    | 1.68   | .28    | .48     | .50    | 1.26    | 1.47    | --   |
| 1/ Low fertilizer level (400 lbs 8-16-16 at planting; 200 lbs 0-20-20 annually)  |                       |         |                        |        |                 |                       |        |                        |        |                  |                             |        |        |        |         |        |         |         |      |
| 2/ High fertilizer level (700 lbs 8-16-16 at planting; 400 lbs 0-20-20 annually) |                       |         |                        |        |                 |                       |        |                        |        |                  |                             |        |        |        |         |        |         |         |      |



## NEW YORK - Ithaca

Table 23. Summary of 1957 data from 1956 alfalfa variety trial - Ketola Field. Broadcast seeded May 11, 1956; 5 x 5 balanced lattice, 6 replications. Seeding rate = 50 viable seeds/sq ft. Cutting management - 3 cuts per season <sup>1/</sup>.

| Variety                     | Yield - Tons Per Acre |         |         |         | % Legume      |      |      | Total Yield<br>Alfalfa<br>T/A Fraction | % DM<br>6/6 | % Stand<br>5/- |
|-----------------------------|-----------------------|---------|---------|---------|---------------|------|------|----------------------------------------|-------------|----------------|
|                             | 6/3 7/23 9/10 Total   |         |         |         | 6/3 7/23 9/10 |      |      |                                        |             |                |
|                             | 6/3                   | 7/23    | 9/10    | Total   | 6/3           | 7/23 | 9/10 |                                        |             |                |
| Ranger                      | 2.01                  | 1.43    | .85     | 4.29    | 78            | 100  | 100  | 3.85                                   | 19.5        | 75             |
| New York Syn. 22            | 2.13                  | 1.54    | .87     | 4.54    | 91            | ↓    | ↓    | 4.35                                   | 18.4        | 78             |
| Narragansett <sup>2/</sup>  | 2.26                  | 1.77    | .97     | 5.00    | 86            | ↓    | ↓    | 4.68                                   | 19.5        | 88             |
| Narragansett <sup>2/</sup>  | 2.33                  | 1.68    | .98     | 5.00    | 87            | ↓    | ↓    | 4.69                                   | 19.2        | 89             |
| Vernal                      | 2.17                  | 1.70    | .97     | 4.84    | 89            | ↓    | ↓    | 4.60                                   | 19.2        | 86             |
| Vernal                      | 2.25                  | 1.77    | .98     | 5.00    | 85            | 100  | 100  | 4.66                                   | 19.7        | 88             |
| N.Y. Creeping-55            | 1.73                  | 1.12    | .44     | 3.29    | 48            | ↓    | ↓    | 2.39                                   | 20.0        | 26             |
| Atlantic                    | 2.19                  | 1.57    | .99     | 4.75    | 82            | ↓    | ↓    | 4.36                                   | 20.2        | 85             |
| Lahontan                    | 1.84                  | 1.33    | .69     | 3.86    | 63            | ↓    | ↓    | 3.18                                   | 19.8        | 67             |
| Williamsburg                | 2.14                  | 1.68    | 1.05    | 4.87    | 77            | ↓    | ↓    | 4.38                                   | 19.8        | 84             |
| New York 24                 | 1.91                  | 1.45    | .77     | 4.12    | 74            | 100  | 100  | 3.63                                   | 19.3        | 65             |
| Grimm                       | 2.10                  | 1.64    | .95     | 4.68    | 82            | ↓    | ↓    | 4.31                                   | 19.4        | 81             |
| Du Puits <sup>2/</sup>      | 2.29                  | 1.75    | 1.06    | 5.10    | 97            | ↓    | ↓    | 5.03                                   | 2.01        | 93             |
| Du Puits <sup>2/</sup>      | 2.31                  | 1.68    | 1.08    | 5.07    | 96            | ↓    | ↓    | 4.98                                   | 2.00        | 89             |
| New York 26A                | 1.82                  | 1.32    | .74     | 3.88    | 70            | ↓    | ↓    | 3.33                                   | 19.1        | 55             |
| Tourneur #501               | 2.26                  | 1.80    | 1.05    | 5.11    | 96            | 100  | 100  | 5.02                                   | 20.0        | 91             |
| Socheville                  | 2.20                  | 1.76    | 1.05    | 5.01    | 95            | ↓    | ↓    | 4.90                                   | 19.5        | 88             |
| Desprez #5769 <sup>2/</sup> | 2.30                  | 1.72    | .96     | 4.98    | 96            | ↓    | ↓    | 4.89                                   | 20.2        | 88             |
| Desprez #5770 <sup>2/</sup> | 2.30                  | 1.72    | 1.01    | 5.03    | 97            | ↓    | ↓    | 4.96                                   | 20.0        | 92             |
| Lucerne Alfalfa             | 2.32                  | 1.82    | 1.00    | 5.14    | 99            | ↓    | ↓    | 5.12                                   | 20.1        | 90             |
| N.Y. Syn. A(scar.)          | 2.36                  | 1.76    | .96     | 5.07    | 90            | 100  | 100  | 4.84                                   | 19.8        | 88             |
| N.Y. Syn. B                 | 2.25                  | 1.77    | .97     | 5.00    | 93            | ↓    | ↓    | 4.83                                   | 20.0        | 88             |
| N.Y. Syn. C(scar.)          | 2.21                  | 1.64    | .98     | 4.83    | 83            | ↓    | ↓    | 4.45                                   | 20.0        | 84             |
| Purdue Syn F                | 2.08                  | 1.63    | .97     | 4.68    | 92            | ↓    | ↓    | 4.51                                   | 18.7        | 88             |
| New York 29A                | 2.09                  | 1.57    | .82     | 4.47    | 69            | ↓    | ↓    | 3.83                                   | 19.9        | 76             |
| Av.                         | 2.15                  | 1.62    | .92     | 4.70    | 85            | 100  | 100  | 4.37                                   | 19.7        | 81             |
| F - Var.                    | 8.84**                | 12.18** | 30.60** | 18.05** |               |      |      |                                        |             |                |
| L.S.D. (P=.05)              | .16                   | .14     | .07     | .31     |               |      |      |                                        |             |                |
| C.V.                        | 6.6                   | 7.6     | 6.9     | 5.8     |               |      |      |                                        |             |                |

<sup>1/</sup> Excellent initial stands.

<sup>2/</sup> Note consistency of performance of different seed lots of same varieties. This procedure is recommended as a "built-in" check on test accuracy.

## NEW YORK - Saltonstall

Table 24. 1956-1957 summary of 1955 alfalfa variety and management trials - Cayuga County. Broadcast seeded May 12, 1955; 6 reps. Split - split - plot design; 2 fertility levels, 3 cutting managements and 6 varieties. Seeding rate = 10#/acre.

| Variety                                        | Mean yields - tons/acre |      |               |      |               |      |      |      |      |
|------------------------------------------------|-------------------------|------|---------------|------|---------------|------|------|------|------|
|                                                | 2 cuts/season           |      | 3 cuts/season |      | 4 cuts/season |      | 1956 | 1957 | Av.  |
|                                                | 1956                    | 1957 | Av.           | 1956 | 1957          | Av.  |      |      |      |
| <u>All forage, fertility level A2/</u>         |                         |      |               |      |               |      |      |      |      |
| Narragansett                                   | 2.65                    | 3.62 | 3.13          | 2.79 | 3.29          | 3.04 | 2.66 | 3.13 | 2.89 |
| Du Puits                                       | 2.92                    | 3.76 | 3.34          | 3.21 | 3.35          | 3.28 | 3.15 | 3.18 | 3.16 |
| Vernal                                         | 2.76                    | 3.81 | 3.28          | 2.94 | 3.09          | 3.01 | 2.83 | 2.94 | 2.88 |
| Ranger                                         | 2.51                    | 3.34 | 2.92          | 2.36 | 2.76          | 2.56 | 2.11 | 2.62 | 2.36 |
| Socheville                                     | 2.88                    | 3.88 | 3.38          | 2.79 | 3.48          | 3.13 | 2.91 | 3.17 | 3.04 |
| Grimm                                          | 2.40                    | 3.50 | 2.95          | 2.43 | 2.88          | 2.65 | 2.28 | 2.78 | 2.53 |
| Average                                        | 2.69                    | 3.65 | 3.17          | 2.75 | 3.14          | 2.94 | 2.66 | 2.97 | 2.81 |
| L.S.D.(P = .05)                                | .22                     | .22  |               | .44  | .18           |      | .26  | .23  |      |
| <u>Alfalfa fraction on fertility level A2/</u> |                         |      |               |      |               |      |      |      |      |
| Narragansett                                   | 2.37                    | 3.22 | 2.79          | 2.58 | 2.98          | 2.78 | 2.37 | 2.86 | 2.61 |
| Du Puits                                       | 2.74                    | 3.50 | 3.12          | 3.00 | 2.93          | 2.96 | 2.94 | 2.94 | 2.94 |
| Vernal                                         | 2.53                    | 3.21 | 2.87          | 2.65 | 2.64          | 2.64 | 2.49 | 2.63 | 2.56 |
| Ranger                                         | 2.28                    | 2.76 | 2.52          | 1.95 | 2.19          | 2.07 | 1.72 | 2.31 | 2.01 |
| Socheville                                     | 2.68                    | 3.57 | 3.12          | 2.56 | 3.12          | 2.84 | 2.67 | 2.88 | 2.77 |
| Grimm                                          | 2.18                    | 2.89 | 2.53          | 2.01 | 2.36          | 2.18 | 1.93 | 2.44 | 2.18 |
| Average                                        | 2.47                    | 3.18 | 2.82          | 2.46 | 2.67          | 2.56 | 2.35 | 2.68 | 2.51 |

Continued

## NEW YORK - Saltonstall

Table 24. Continued

| Variety                                        | 2 cuts/season |      | 3 cuts/season |      | 4 cuts/season |      |
|------------------------------------------------|---------------|------|---------------|------|---------------|------|
|                                                | 1956          | 1957 | Av.           | 1956 | 1957          | Av.  |
| <u>All forage, fertility level B3/</u>         |               |      |               |      |               |      |
| Narragansett                                   | 2.98          | 3.88 | 3.43          | 2.95 | 3.47          | 3.21 |
| Du Puits                                       | 3.42          | 3.80 | 3.61          | 3.24 | 3.56          | 3.40 |
| Vernal                                         | 3.07          | 3.89 | 3.48          | 3.01 | 3.36          | 3.18 |
| Ranger                                         | 2.59          | 3.55 | 3.07          | 2.39 | 2.94          | 2.66 |
| Socheville                                     | 2.88          | 3.96 | 3.42          | 2.85 | 3.52          | 3.18 |
| Grimm                                          | 2.65          | 3.63 | 3.14          | 2.47 | 3.33          | 2.90 |
| Average                                        | 2.93          | 3.78 | 3.35          | 2.82 | 3.36          | 3.09 |
| L.S.D. (P = .05)                               | .29           | --   | --            | .25  | .23           | --   |
|                                                |               |      |               |      | .25           | .23  |
| <u>Alfalfa Fraction on Fertility Level B3/</u> |               |      |               |      |               |      |
| Narragansett                                   | 2.78          | 3.29 | 3.03          | 2.60 | 3.09          | 2.84 |
| Du Puits                                       | 3.18          | 3.42 | 3.30          | 2.97 | 3.15          | 3.06 |
| Vernal                                         | 2.81          | 3.31 | 3.06          | 2.68 | 2.84          | 2.76 |
| Ranger                                         | 2.32          | 3.03 | 2.67          | 1.88 | 2.32          | 2.10 |
| Socheville                                     | 2.66          | 3.45 | 3.05          | 2.56 | 3.07          | 2.81 |
| Grimm                                          | 2.37          | 3.04 | 2.70          | 2.12 | 2.82          | 2.47 |
| Average                                        | 2.68          | 3.25 | 2.96          | 2.47 | 2.88          | 2.67 |
|                                                |               |      |               |      |               | 2.17 |
|                                                |               |      |               |      |               | 2.62 |
|                                                |               |      |               |      |               | 2.39 |

1/ Weed competition was fairly severe during establishment on this test - additional fertilizer beyond optimum only added to this problem. A very late cold season occurred during the first harvest year which delayed spring growth so that the early cuts under the 3rd and 4th cut managements injured stands to a degree that these cutting managements did not exceed two cuts in yield as would normally be expected during the first two harvest years.

2/ 300# 10-20-20 at planting time; top dressed 200# 0-20-20- annually.

3/ 500# 10-20-20 at planting time; top dressed 400# 0-20-20- annually.

## NEW YORK - Canton

Table 25. 1955-1957 summary for 1954 eastern region uniform alfalfa variety test. Broadcast planted May 18, 1954 with oat nurse crop. Planting rate - 50 viable seeds/sq. ft. Randomized block design - 6 replications 1/

| Variety            | T/A of 12% Moisture Hay |        |        |         | Alfalfa Fraction |      |      |         | % of<br>Total<br>Prod. 2/ |
|--------------------|-------------------------|--------|--------|---------|------------------|------|------|---------|---------------------------|
|                    | Total Production        |        |        |         | Av.              |      |      |         |                           |
|                    | 1955                    | 1956   | 1957   | 1955-57 | 1955             | 1956 | 1957 | 1955-57 |                           |
| Sevelra            | 2.64                    | 4.27   | 5.29   | 4.06    | 1.81             | 3.81 | 3.92 | 3.18    | 78                        |
| Williamsburg       | 3.76                    | 4.53   | 5.69   | 4.66    | 3.22             | 4.25 | 4.79 | 4.08    | 88                        |
| Du Puits           | 3.87                    | 4.81   | 5.61   | 4.76    | 3.34             | 4.53 | 4.58 | 4.15    | 87                        |
| Vernal             | 3.45                    | 4.69   | 5.34   | 4.49    | 2.85             | 4.40 | 4.09 | 3.78    | 84                        |
| Nomad              | 2.26                    | 3.95   | 4.76   | 3.65    | 1.26             | 3.13 | 2.87 | 2.42    | 66                        |
| A-225              | 2.79                    | 4.70   | 5.23   | 4.23    | 2.10             | 4.18 | 4.00 | 3.42    | 81                        |
| Narragansett       | 4.14                    | 4.66   | 5.97   | 4.92    | 3.56             | 4.44 | 5.20 | 4.40    | 89                        |
| Talent             | 2.46                    | 4.04   | 5.29   | 3.93    | 1.91             | 3.60 | 3.89 | 3.13    | 80                        |
| Buffalo            | 3.41                    | 4.34   | 5.19   | 4.31    | 2.73             | 4.02 | 3.91 | 3.55    | 82                        |
| Atlantic           | 3.71                    | 4.63   | 5.79   | 4.71    | 3.10             | 4.40 | 5.07 | 4.19    | 89                        |
| Rhizoma            | 3.64                    | 4.69   | 5.38   | 4.57    | 3.22             | 4.55 | 4.83 | 4.20    | 92                        |
| Grimm              | 3.64                    | 4.90   | 5.59   | 4.71    | 3.14             | 4.65 | 4.89 | 4.22    | 90                        |
| A-224              | 2.61                    | 4.48   | 5.01   | 4.03    | 1.86             | 3.84 | 3.27 | 2.99    | 74                        |
| Ranger             | 3.04                    | 4.47   | 5.38   | 4.29    | 2.34             | 4.12 | 4.30 | 3.58    | 83                        |
| Socheville         | 4.95                    | 4.59   | 6.20   | 5.24    | 4.70             | 4.51 | 5.79 | 4.99    | 95                        |
| Average            | 3.36                    | 4.52   | 5.45   | 4.44    | 3.36             | 4.16 | 4.35 | 3.95    | 89                        |
| F - Varieties      | 3.15**                  | 3.84** | 3.31** |         |                  |      |      |         |                           |
| L.S.D. (P = .05)   | 1.16                    | .39    | .57    |         |                  |      |      |         |                           |
| Coeff. of Var. (%) | 27.2                    | 6.8    | 8.3    |         |                  |      |      |         |                           |

1/ Replications on this test were laid out on a drainage gradient that did affect growth but gave overall good production. Unfortunately, a gradient in soil type with respect to overlying sand existed across replications - this had a considerable affect on variety response particularly in a dry year of establishment when root depth had not yet exceeded the sand layer. Specific variety comparisons are unduly influenced by chance locations in the replications although failure of certain varieties to maintain their yield rank is of interest.

2/ This is a fertile site with cool summer temperature and quackgrass grows profusely. Nearly all the non-alfalfa fraction is quackgrass. Note differences among varieties in their resistance to quack encroachment.



## NEW YORK - Canton

Table 26. 1955-56 Summary for 1954 alfalfa polycross progeny test. Planted May 18, 1954.  
Broadcast plots 5' x 16' in 4 replications. 10 x 10 simple lattice.  $\frac{1}{2}$  Seeding rate =  
48 viable seeds/sq ft.

| Clone<br>Ident. | Total Yield -T/Acre (adj)<br>(Including Weeds) |      | Total Yield (Adj.)<br>(Alfalfa Fraction) |      | Total Yield (Unadj)<br>1955-56 Av.<br>(Weeds In) (Weeds Out) |      | Total Unadj.<br>Based on Av.<br>Comp. % |
|-----------------|------------------------------------------------|------|------------------------------------------|------|--------------------------------------------------------------|------|-----------------------------------------|
|                 | 1955                                           | 1956 | 1955                                     | 1956 | 1955                                                         | 1956 |                                         |
| 27E -C2         | 4.63                                           | 4.55 | 4.60                                     | 4.28 | 4.85                                                         | 4.66 | 4.63                                    |
| -C3             | 4.07                                           | 4.66 | 4.36                                     | 4.42 | 4.49                                                         | 4.30 | 4.26                                    |
| -C5             | 3.66                                           | 4.64 | 4.15                                     | 4.32 | 4.24                                                         | 3.81 | 3.78                                    |
| -C10            | 4.48                                           | 4.66 | 4.57                                     | 4.46 | 4.66                                                         | 4.34 | 4.39                                    |
| -C11            | 3.10                                           | 4.34 | 3.72                                     | 3.96 | 3.93                                                         | 3.50 | 3.46                                    |
| -C12            | 4.18                                           | 4.36 | 4.27                                     | 4.17 | 4.58                                                         | 4.38 | 4.36                                    |
| -C13            | 4.03                                           | 4.30 | 4.16                                     | 4.11 | 4.37                                                         | 4.24 | 4.21                                    |
| -C14            | 4.16                                           | 4.74 | 4.45                                     | 4.52 | 4.58                                                         | 4.11 | 4.04                                    |
| -C27            | 3.82                                           | 4.71 | 4.26                                     | 4.42 | 4.58                                                         | 4.32 | 4.30                                    |
| -C32            | 3.84                                           | 4.64 | 4.24                                     | 4.39 | 4.51                                                         | 4.24 | 4.25                                    |
| 27E -C35        | 4.18                                           | 4.82 | 4.50                                     | 4.48 | 4.68                                                         | 4.36 | 4.36                                    |
| -C36            | 3.99                                           | 4.36 | 4.18                                     | 4.09 | 4.20                                                         | 3.90 | 3.90                                    |
| -C42            | 3.91                                           | 4.70 | 4.30                                     | 4.38 | 4.30                                                         | 3.88 | 3.86                                    |
| -C44            | 4.30                                           | 4.54 | 4.42                                     | 4.30 | 4.42                                                         | 4.04 | 4.02                                    |
| -C46            | 4.36                                           | 4.54 | 4.45                                     | 4.32 | 4.57                                                         | 4.28 | 4.26                                    |
| -C51            | 4.19                                           | 4.52 | 4.36                                     | 4.25 | 4.58                                                         | 4.15 | 4.15                                    |
| -C53            | 3.29                                           | 4.32 | 3.80                                     | 4.04 | 3.92                                                         | 3.58 | 3.58                                    |
| -C54            | 4.31                                           | 4.57 | 4.44                                     | 4.47 | 4.47                                                         | 4.11 | 4.10                                    |
| -C57            | 3.81                                           | 4.25 | 4.03                                     | 3.94 | 4.26                                                         | 3.92 | 3.90                                    |
| -C63            | 4.56                                           | 4.64 | 4.60                                     | 4.36 | 4.78                                                         | 4.40 | 4.39                                    |
| 27E -C79        | 3.59                                           | 4.36 | 3.98                                     | 3.90 | 3.98                                                         | 3.52 | 3.48                                    |
| -C87            | 3.84                                           | 4.36 | 4.10                                     | 4.13 | 3.97                                                         | 3.59 | 3.62                                    |
| -C91            | 4.48                                           | 4.97 | 4.72                                     | 4.66 | 4.55                                                         | 4.04 | 3.94                                    |
| -C112           | 4.04                                           | 4.63 | 4.34                                     | 4.46 | 4.16                                                         | 3.67 | 3.56                                    |
| -C125           | 3.66                                           | 4.71 | 4.18                                     | 4.41 | 4.13                                                         | 3.55 | 3.54                                    |
| -C130           | 4.12                                           | 4.42 | 4.27                                     | 4.14 | 4.32                                                         | 3.90 | 3.76                                    |
| -C138           | 3.99                                           | 4.67 | 4.33                                     | 4.44 | 4.28                                                         | 3.96 | 3.92                                    |
| -C144           | 3.74                                           | 4.63 | 4.18                                     | 4.47 | 4.05                                                         | 3.56 | 3.55                                    |
| -C170           | 3.46                                           | 4.17 | 3.82                                     | 3.86 | 3.87                                                         | 3.40 | 3.36                                    |
| -C172           | 3.49                                           | 4.45 | 3.97                                     | 4.19 | 3.98                                                         | 3.58 | 3.53                                    |



## NEW YORK - Canton

Table 26. Continued

| Clone<br>Ident. | Total Yield -T/Acre (adj)<br>(Including Weeds) |      | Total Yield (adj)<br>(Alfalfa Fraction) |      | Total Yield (Unadj)<br>1955-56 Av.<br>(Weeds In)(Weeds Out) |      | Total Unadj.<br>Based on Av.<br>Comp. % |      |
|-----------------|------------------------------------------------|------|-----------------------------------------|------|-------------------------------------------------------------|------|-----------------------------------------|------|
|                 | 1955                                           | 1956 | 1955                                    | 1956 | 1955                                                        | 1956 | 1955                                    | 1956 |
| 27E -C174       | 3.74                                           | 4.38 | 4.06                                    | 3.98 | 3.55                                                        | 4.26 | 3.83                                    | 3.80 |
| -C175           | 3.98                                           | 4.40 | 4.19                                    | 4.11 | 3.76                                                        | 4.24 | 3.86                                    | 3.86 |
| -C176           | 3.93                                           | 4.23 | 4.08                                    | 3.93 | 3.75                                                        | 4.09 | 3.74                                    | 3.74 |
| -C180           | 3.74                                           | 4.06 | 3.90                                    | 3.78 | 3.48                                                        | 3.92 | 3.46                                    | 3.37 |
| -C181           | 4.10                                           | 4.63 | 4.36                                    | 4.24 | 3.88                                                        | 4.50 | 4.04                                    | 4.03 |
| -C183           | 4.19                                           | 4.25 | 4.22                                    | 4.03 | 3.89                                                        | 4.46 | 4.16                                    | 4.16 |
| -C184           | 3.53                                           | 4.35 | 3.94                                    | 3.98 | 3.53                                                        | 4.08 | 3.74                                    | 3.73 |
| -C186           | 3.68                                           | 4.51 | 4.10                                    | 4.27 | 3.64                                                        | 4.14 | 3.56                                    | 3.52 |
| -C187           | 4.38                                           | 4.62 | 4.50                                    | 4.40 | 4.16                                                        | 4.74 | 4.47                                    | 4.47 |
| -C188           | 3.59                                           | 4.30 | 3.94                                    | 4.04 | 3.52                                                        | 4.14 | 3.74                                    | 3.74 |
| 27E -C190       | 4.42                                           | 4.34 | 4.38                                    | 4.00 | 4.05                                                        | 4.26 | 3.90                                    | 3.90 |
| -C191           | 4.32                                           | 4.58 | 4.45                                    | 4.40 | 4.19                                                        | 4.19 | 3.88                                    | 3.84 |
| -C195           | 4.00                                           | 4.51 | 4.26                                    | 4.39 | 4.03                                                        | 3.95 | 3.60                                    | 3.60 |
| -C196           | 4.51                                           | 4.76 | 4.64                                    | 4.59 | 4.31                                                        | 4.34 | 3.88                                    | 3.83 |
| -C197           | 4.11                                           | 4.39 | 4.25                                    | 4.19 | 3.96                                                        | 4.07 | 3.69                                    | 3.68 |
| -C199           | 4.02                                           | 4.33 | 4.18                                    | 3.95 | 3.74                                                        | 4.10 | 3.58                                    | 3.56 |
| -C221           | 4.45                                           | 4.47 | 4.46                                    | 4.28 | 4.16                                                        | 4.28 | 3.94                                    | 3.90 |
| -C223           | 4.32                                           | 4.87 | 4.60                                    | 4.78 | 4.41                                                        | 4.33 | 3.90                                    | 3.90 |
| -C247           | 4.12                                           | 4.46 | 4.29                                    | 4.08 | 3.90                                                        | 4.22 | 3.78                                    | 3.76 |
| NY 49 - 5       | 4.05                                           | 4.76 | 4.40                                    | 4.60 | 4.08                                                        | 4.28 | 3.88                                    | 3.84 |
| NY 49 - 6       | 4.29                                           | 4.92 | 4.60                                    | 4.58 | 4.24                                                        | 4.47 | 4.18                                    | 4.10 |
| 49 - 7          | 3.82                                           | 4.81 | 4.32                                    | 4.55 | 3.94                                                        | 4.04 | 3.70                                    | 3.66 |
| 49 - 8          | 4.62                                           | 4.72 | 4.67                                    | 4.51 | 4.38                                                        | 4.36 | 4.03                                    | 3.95 |
| 49 - 9          | 4.72                                           | 4.83 | 4.78                                    | 4.59 | 4.44                                                        | 4.47 | 4.08                                    | 4.07 |
| 49 -10          | 4.38                                           | 4.36 | 4.37                                    | 4.06 | 4.04                                                        | 4.18 | 3.84                                    | 3.84 |
| 49 -13          | 4.26                                           | 4.54 | 4.40                                    | 4.33 | 4.07                                                        | 4.32 | 3.99                                    | 4.00 |
| 49 -14          | 4.64                                           | 4.62 | 4.63                                    | 4.52 | 4.42                                                        | 4.44 | 4.28                                    | 4.27 |
| 49 -15          | 4.17                                           | 4.24 | 4.20                                    | 4.03 | 3.80                                                        | 3.94 | 3.38                                    | 3.41 |
| 49 -18          | 4.41                                           | 4.59 | 4.50                                    | 4.36 | 4.17                                                        | 4.42 | 4.14                                    | 4.14 |
| 49 -19          | 4.32                                           | 4.66 | 4.49                                    | 4.37 | 4.10                                                        | 4.36 | 3.98                                    | 3.96 |

## NEW YORK - Canton

Table 26. Continued

| Clone<br>Ident. | Total Yield -T/Acre (adj)<br>(Including Weeds) |      | Total Yield (adj)<br>(Alfalfa Fraction) |      | Total Yield (Unadj)<br>1955-56 Av.<br>(Weeds In)(Weeds Out) |      | Total Unadj.<br>Based on Av.<br>Comp. % |      |
|-----------------|------------------------------------------------|------|-----------------------------------------|------|-------------------------------------------------------------|------|-----------------------------------------|------|
|                 | 1955                                           | 1956 | 1955                                    | 1956 | 1955                                                        | 1956 | 1955                                    | 1956 |
| NY 49-20        | 4.40                                           | 4.51 | 4.46                                    | 3.98 | 4.24                                                        | 4.11 | 4.47                                    | 4.20 |
| 49-21           | 3.92                                           | 4.38 | 4.15                                    | 3.34 | 4.14                                                        | 3.74 | 4.02                                    | 3.67 |
| 49-22           | 4.26                                           | 4.64 | 4.45                                    | 3.81 | 4.47                                                        | 4.14 | 4.29                                    | 3.95 |
| 49-23           | 4.22                                           | 4.60 | 4.41                                    | 3.83 | 4.27                                                        | 4.05 | 4.25                                    | 3.86 |
| 49-26           | 3.96                                           | 4.32 | 4.14                                    | 3.27 | 4.11                                                        | 3.69 | 4.10                                    | 3.66 |
| 49-27           | 4.09                                           | 4.50 | 4.30                                    | 3.58 | 4.27                                                        | 3.92 | 4.36                                    | 4.01 |
| 49-28           | 3.84                                           | 4.29 | 4.06                                    | 3.22 | 4.03                                                        | 3.62 | 4.02                                    | 3.64 |
| 49-29           | 4.01                                           | 4.57 | 4.29                                    | 3.39 | 4.34                                                        | 3.86 | 4.16                                    | 3.60 |
| 49-31           | 4.46                                           | 4.56 | 4.51                                    | 4.00 | 4.34                                                        | 4.17 | 4.58                                    | 4.30 |
| 49-32           | 3.68                                           | 4.15 | 3.92                                    | 3.14 | 3.82                                                        | 3.48 | 3.93                                    | 3.52 |
| NY 49-33        | 3.40                                           | 4.18 | 3.79                                    | 2.99 | 3.86                                                        | 3.42 | 4.12                                    | 3.90 |
| 49-34           | 4.06                                           | 4.33 | 4.20                                    | 3.75 | 4.13                                                        | 3.94 | 4.39                                    | 4.26 |
| 49-35           | 4.18                                           | 4.44 | 4.31                                    | 3.76 | 4.14                                                        | 3.95 | 4.46                                    | 4.14 |
| 49-37           | 4.34                                           | 4.62 | 4.48                                    | 3.94 | 4.32                                                        | 4.13 | 4.64                                    | 4.32 |
| 49-38           | 3.82                                           | 4.43 | 4.12                                    | 3.46 | 4.12                                                        | 3.79 | 4.40                                    | 4.16 |
| 49-39           | 3.71                                           | 4.18 | 3.94                                    | 3.28 | 3.85                                                        | 3.56 | 4.32                                    | 4.04 |
| 49-40           | 4.97                                           | 4.58 | 4.78                                    | 4.70 | 4.40                                                        | 4.55 | 5.04                                    | 4.96 |
| 49-41           | 3.94                                           | 4.48 | 4.21                                    | 3.57 | 3.93                                                        | 3.75 | 4.40                                    | 3.88 |
| 49-42           | 4.51                                           | 4.45 | 4.48                                    | 4.04 | 4.20                                                        | 4.12 | 4.87                                    | 4.64 |
| 49-44           | 4.44                                           | 4.36 | 4.40                                    | 3.86 | 4.10                                                        | 3.98 | 4.74                                    | 4.41 |
| NY 49-45        | 4.29                                           | 4.63 | 4.46                                    | 3.80 | 4.21                                                        | 4.00 | 4.52                                    | 4.08 |
| 49-46           | 3.71                                           | 4.60 | 4.16                                    | 3.16 | 4.23                                                        | 3.70 | 4.08                                    | 3.60 |
| 49-47           | 4.02                                           | 4.44 | 4.23                                    | 3.64 | 4.18                                                        | 3.91 | 4.11                                    | 3.70 |
| 49-48           | 3.73                                           | 4.22 | 3.98                                    | 3.18 | 3.86                                                        | 3.52 | 3.86                                    | 3.48 |
| 49-50           | 4.58                                           | 4.44 | 4.51                                    | 4.24 | 4.28                                                        | 4.26 | 4.51                                    | 4.20 |
| 49-55           | 4.14                                           | 4.48 | 4.31                                    | 3.94 | 4.24                                                        | 4.09 | 4.42                                    | 4.15 |
| 49-57           | 4.90                                           | 4.73 | 4.82                                    | 4.68 | 4.55                                                        | 4.62 | 4.82                                    | 4.61 |
| 49-58           | 3.43                                           | 4.25 | 3.84                                    | 2.71 | 3.66                                                        | 3.18 | 3.76                                    | 2.90 |
| 49-60           | 4.45                                           | 4.45 | 4.45                                    | 4.02 | 4.24                                                        | 4.13 | 4.56                                    | 4.24 |
| 49-61           | 3.72                                           | 4.41 | 4.06                                    | 3.06 | 4.04                                                        | 3.55 | 4.13                                    | 3.57 |

## NEW YORK - Canton

Table 26. Continued

| Clone<br>Ident.               | Total Yield -T/Acre (Adj)<br>(Including Weeds) |      | Total Yield (Adj)<br>(Alfalfa Fraction) |       | Total Yield (Unadj)<br>1955-56 Av.<br>(Weeds In) (Weeds Out) |      | Total Unadj.<br>Based on Av.<br>Comp. % |      |
|-------------------------------|------------------------------------------------|------|-----------------------------------------|-------|--------------------------------------------------------------|------|-----------------------------------------|------|
|                               | 1955                                           | 1956 | 1955                                    | 1956  | Av.                                                          |      |                                         |      |
| NY 49-64                      | 4.26                                           | 4.86 | 4.56                                    | 3.72  | 4.57                                                         | 4.14 | 4.42                                    | 3.98 |
| 49-65                         | 3.91                                           | 4.77 | 4.34                                    | 3.53  | 4.54                                                         | 4.04 | 4.06                                    | 3.76 |
| 49-67                         | 4.08                                           | 4.72 | 4.40                                    | 3.63  | 4.49                                                         | 4.06 | 4.08                                    | 3.69 |
| 49-68                         | 3.64                                           | 4.32 | 3.98                                    | 3.19  | 4.14                                                         | 3.66 | 3.66                                    | 3.27 |
| 49-69                         | 4.44                                           | 4.54 | 4.49                                    | 4.07  | 4.42                                                         | 4.24 | 4.30                                    | 4.02 |
| 49-72                         | 3.98                                           | 4.33 | 4.16                                    | 3.50  | 4.07                                                         | 3.78 | 4.06                                    | 3.67 |
| 49-75                         | 4.01                                           | 4.35 | 4.18                                    | 3.45  | 4.01                                                         | 3.73 | 3.98                                    | 3.56 |
| 5 - 7 NJ                      | 3.62                                           | 4.48 | 4.05                                    | 3.04  | 4.13                                                         | 3.58 | 3.76                                    | 3.12 |
| 5 - 2 NJ                      | 4.24                                           | 4.60 | 4.42                                    | 3.79  | 4.40                                                         | 4.10 | 4.34                                    | 4.04 |
| Ranger                        | 4.04                                           | 4.48 | 4.26                                    | 3.66  | 4.30                                                         | 3.98 | 4.12                                    | 3.83 |
| Average                       | 4.07                                           | 4.50 | 4.28                                    | 3.60  | 4.24                                                         | 3.92 | 4.28                                    | 3.89 |
| F - Varieties<br>(Rand. Blk.) | 1.03-                                          | .64- |                                         | 1.07- | .49-                                                         |      |                                         |      |
| L.S.D. (P=.05)                | 1.25                                           | .65  |                                         | 1.50  | .81                                                          |      |                                         |      |
| Coeff. of Var. 22.1           |                                                | 7.4  |                                         | 29.9  | 13.8                                                         |      |                                         |      |
| Lattice (P = .05).85          |                                                | .52  |                                         | .98   | .60                                                          |      |                                         |      |

1/ Yield data on these progenies are fairly consistent with previous evaluation and are of value. However, experience here with large lattice designs on alfalfa indicate they are not desirable under New York conditions. Alfalfa is much more affected by soil depth and drainage than shallow rooted crops and block size should be small. Large lattices allow no suitable variety comparisons if stands are affected by wilt or other factors. Small tests, either randomized block or small lattices, with at least six replications and adequate check varieties appear to be better suited for testing large numbers of progenies.

## NEW YORK - Ithaca

Table 27. 1954-1957 Summary for 1953 alfalfa variety and management yield trial - Ketola Field.  
Broadcast seeded May 14, 1953, 6 replications, split plot design with 3 cutting  
managements. Seeding rate 12#/acre.

| Variety                       | Management            |        |        |                         |         |         |                        |        |         |           |        |        |
|-------------------------------|-----------------------|--------|--------|-------------------------|---------|---------|------------------------|--------|---------|-----------|--------|--------|
|                               | Two Cuttings Per Year |        |        | Three Cuttings per Year |         |         | Four Cuttings Per Year |        |         | Tons/Acre |        |        |
|                               | 1954                  | 1955   | 1956   | 1957                    | 1954    | 1955    | 1956                   | 1957   | 1954    | 1955      | 1956   | 1957   |
| Atlantic Cert. Stanford '53   | 3.84                  | 3.85   | 4.34   | 4.90                    | 4.34    | 4.99    | 4.12                   | 2.94   | 4.24    | 4.47      | 3.76   | 3.21   |
| Du Puits F.C. 24648           | 4.45                  | 4.21   | 4.56   | 5.13                    | 5.15    | 5.62    | 5.25                   | 4.12   | 5.05    | 5.16      | 4.73   | 3.86   |
| Grimm F.C. 23647 Idaho Cert.  | 3.61                  | 3.71   | 4.31   | 4.83                    | 4.08    | 4.56    | 4.09                   | 2.97   | 3.67    | 4.27      | 3.48   | 3.17   |
| Narr. Cert. Stanford '53      | 3.88                  | 3.78   | 4.76   | 5.26                    | 4.45    | 4.87    | 4.59                   | 3.73   | 4.44    | 4.96      | 4.43   | 3.78   |
| Ranger Cert. Stanford '53     | 3.50                  | 3.54   | 4.13   | 5.00                    | 4.01    | 4.45    | 4.06                   | 3.28   | 3.85    | 4.13      | 3.59   | 3.45   |
| Rhizoma F.C. 24798            | 3.98                  | 3.60   | 4.60   | 4.83                    | 4.48    | 4.88    | 4.45                   | 3.55   | 3.88    | 4.48      | 3.94   | 3.76   |
| Socheville Rousett & Fils '53 | 4.17                  | 4.07   | 4.65   | 5.34                    | 5.20    | 5.39    | 5.08                   | 4.04   | 5.30    | 5.03      | 4.30   | 3.62   |
| Vernal Wisconsin '53          | 3.98                  | 3.82   | 4.64   | 5.09                    | 4.47    | 4.79    | 4.60                   | 3.65   | 4.16    | 4.45      | 4.14   | 3.85   |
| A-224 Utah '53                | 3.95                  | 3.65   | 4.38   | 4.67                    | 4.20    | 4.36    | 4.08                   | 3.29   | 3.54    | 3.66      | 3.33   | 3.12   |
| A-225 Nebr. 1952 & 1947       | 4.16                  | 3.95   | 4.59   | 5.15                    | 4.03    | 4.51    | 4.26                   | 3.44   | 3.61    | 4.36      | 3.66   | 3.27   |
| Nomad F.C. 24687              | 3.29                  | 3.28   | 4.33   | 4.42                    | 2.72    | 3.51    | 3.41                   | 2.33   | 2.45    | 3.19      | 2.79   | 2.76   |
| Ontario Variegated '50        | 4.10                  | 4.05   | 4.39   | 5.05                    | 4.49    | 5.21    | 4.39                   | 3.34   | 4.43    | 4.74      | 3.94   | 3.48   |
| Sevelra F.C. 24660            | 3.81                  | 3.72   | 4.29   | 4.93                    | 4.03    | 4.58    | 4.04                   | 2.99   | 3.84    | 4.30      | 3.53   | 3.10   |
| Talent F.C. 24702             | 3.13                  | 3.29   | 3.71   | 4.60                    | 4.06    | 4.49    | 4.26                   | 3.56   | 4.06    | 4.42      | 3.85   | 3.09   |
| Williamsburg F.C. 24803       | 3.54                  | 3.85   | 4.42   | 5.26                    | 4.47    | 4.77    | 4.64                   | 3.48   | 4.12    | 4.28      | 3.52   | 3.14   |
| Churchville Sel. (Riga)       | 3.81                  | 3.66   | 4.08   | 4.78                    | 4.38    | 4.76    | 4.33                   | 3.49   | 3.90    | 4.33      | 3.74   | 3.38   |
| Average                       | 3.82                  | 3.75   | 4.39   | 4.93                    | 4.28    | 4.73    | 4.35                   | 3.39   | 4.03    | 4.39      | 3.80   | 3.38   |
| F- Varieties                  | 3.75**                | 5.06** | 2.74** | 3.99**                  | 18.87** | 13.65** | 16.75**                | 8.65** | 18.08** | 11.94**   | 9.89** | 6.27** |
| L.S.D. (P = .05)              | .53                   | .31    | .36    | .39                     | .36     | .36     | .30                    | .42    | .43     | .40       | .43    | .37    |

These trials illustrate conclusively variety x cutting management in alfalfa. The full potential of quick recovering growth types can only be expressed under a management which exploits this potential. The large increase in forage tonnage and improvement in quality which can be obtained by combining increased cutting intensity, the best varieties and shorter lays can markedly affect alfalfa production. Early vigor, stand establishment and speed of recovery are most important in varieties used with this system.



## NEW YORK - Ithaca

Table 28. 1956 summary for 1951 NE-10 alfalfa polycross progeny test - Caldwell II (1952-55 summary previously given). Broadcast planted May 9, 1951, seeding rate 55 viable seeds/sq ft. 9 x 9 simple lattice, 4 replications

| Ident.   | Yield-Tons/Acre   |      |      | Adj.<br>Total | % Stand <sup>2</sup> /<br>10/11 | % Alfalfa<br>6/13 |
|----------|-------------------|------|------|---------------|---------------------------------|-------------------|
|          | 6/13 <sup>1</sup> | 7/31 | 9/10 |               |                                 |                   |
| 07E - C2 | 1.48              | 1.33 | .71  | 3.58          | 11                              | 59                |
| - C3     | 1.48              | 1.19 | .73  | 3.50          | 14                              | 56                |
| - C10    | 1.70              | 1.37 | .81  | 3.66          | 35                              | 91                |
| - C11    | 1.51              | 1.36 | .70  | 3.45          | 14                              | 62                |
| - C12    | 1.32              | 1.19 | .74  | 3.20          | 15                              | 68                |
| - C13    | 1.33              | 1.04 | .61  | 3.18          | 15                              | 54                |
| - C14    | 1.48              | 1.22 | .76  | 3.26          | 20                              | 54                |
| - C27    | 1.56              | 1.28 | .76  | 3.46          | 16                              | 54                |
| - C32    | 1.49              | 1.33 | .78  | 3.49          | 20                              | 55                |
| - C35    | 1.63              | 1.27 | .72  | 3.67          | 16                              | 71                |
| - C36    | 1.53              | 1.28 | .78  | 3.67          | 25                              | 54                |
| - C42    | 1.66              | 1.60 | .93  | 3.95          | 31                              | 84                |
| - C44    | 1.52              | 1.20 | .82  | 3.49          | 24                              | 66                |
| - C46    | 1.46              | 1.29 | .82  | 3.51          | 32                              | 76                |
| - C51    | 1.29              | 1.06 | .62  | 3.16          | 16                              | 58                |
| - C53    | 1.50              | 1.38 | .84  | 3.50          | 30                              | 71                |
| - C54    | 1.48              | 1.30 | .82  | 3.44          | 25                              | 64                |
| - C57    | 1.40              | 1.21 | .69  | 3.17          | 19                              | 71                |
| - C79    | 1.46              | 1.29 | .79  | 3.54          | 36                              | 69                |
| - C87    | 1.46              | 1.14 | .64  | 3.29          | 16                              | 59                |
| - C91    | 1.63              | 1.47 | .95  | 3.77          | 39                              | 78                |
| - C112   | 1.64              | 1.41 | .86  | 3.72          | 32                              | 55                |
| - C130   | 1.57              | 1.32 | .78  | 3.56          | 20                              | 75                |
| - C144   | 1.20              | 1.02 | .61  | 2.96          | 12                              | 34                |
| - C174   | 1.44              | 1.36 | .90  | 3.43          | 29                              | 51                |
| - C175   | 1.40              | 1.22 | .75  | 3.16          | 14                              | 40                |
| - C176   | 1.38              | 1.21 | .71  | 3.12          | 20                              | 48                |
| - C180   | 1.27              | .91  | .57  | 2.70          | 8                               | 20                |
| - C183   | 1.48              | 1.19 | .67  | 3.32          | 12                              | 46                |
| - C184   | 1.52              | 1.42 | .86  | 3.45          | 28                              | 75                |
| - C187   | 1.60              | 1.38 | .82  | 3.56          | 20                              | 52                |
| - C188   | 1.66              | 1.45 | .93  | 3.87          | 30                              | 82                |
| - C190   | 1.38              | 1.20 | .66  | 3.32          | 15                              | 52                |
| - C191   | 1.47              | 1.20 | .77  | 3.12          | 24                              | 52                |
| - C195   | 1.56              | 1.26 | .78  | 3.34          | 15                              | 59                |
| - C196   | 1.58              | 1.41 | .83  | 3.59          | 26                              | 60                |
| - C197   | 1.30              | .94  | .55  | 2.98          | 12                              | 19                |
| - C199   | 1.33              | .98  | .58  | 3.11          | 11                              | 25                |
| - C221   | 1.52              | 1.28 | .74  | 3.44          | 22                              | 64                |
| - C223   | 1.48              | 1.02 | .54  | 3.03          | 6                               | 25                |
| - C5-7   | 1.36              | 1.02 | .62  | 3.08          | 14                              | 24                |
| - 49-6   | 1.30              | 1.02 | .60  | 3.23          | 6                               | 32                |
| - 49-8   | 1.41              | 1.20 | .76  | 3.28          | 22                              | 52                |
| - 49-10  | 1.51              | 1.23 | .80  | 3.52          | 26                              | 49                |
| - 49-13  | 1.46              | 1.20 | .77  | 3.45          | 25                              | 54                |



NOT FOR PUBLICATION NEW YORK - Ithaca

Table 28. Continued

| Ident.                        | Yield-Tons/Acre    |        |        | Adj.<br>Total | % Stand <sup>2/</sup><br>10/11 | % Alfalfa<br>6/13 |
|-------------------------------|--------------------|--------|--------|---------------|--------------------------------|-------------------|
|                               | 6/13 <sup>1/</sup> | 7/31   | 9/10   |               |                                |                   |
| 07E - 49-14                   | 1.50               | 1.19   | .72    | 3.64          | 28                             | 50                |
| - 49-15                       | 1.64               | 1.36   | .84    | 4.11          | 26                             | 64                |
| - 49-19                       | 1.57               | 1.50   | .87    | 3.88          | 35                             | 75                |
| - 49-20                       | 1.43               | 1.21   | .67    | 3.34          | 12                             | 48                |
| - 49-22                       | 1.33               | 1.17   | .64    | 3.26          | 12                             | 61                |
| - 49-26                       | 1.25               | .94    | .50    | 3.05          | 8                              | 30                |
| Wisc. Syn G                   | 1.64               | 1.44   | .89    | 3.93          | 32                             | 64                |
| 07E - 49-32                   | 1.40               | 1.25   | .71    | 3.38          | 18                             | 41                |
| - 49-33                       | 1.36               | 1.38   | .74    | 3.53          | 20                             | 55                |
| 07E - 49-34                   | 1.48               | 1.16   | .67    | 3.46          | 10                             | 40                |
| - 49-35                       | 1.45               | 1.01   | .59    | 3.24          | 11                             | 36                |
| - 49-37                       | 1.45               | 1.32   | .78    | 3.41          | 28                             | 71                |
| - 49-38                       | 1.56               | 1.15   | .68    | 3.34          | 18                             | 45                |
| - 49-39                       | 1.44               | 1.16   | .74    | 3.38          | 16                             | 36                |
| - 49-41                       | 1.33               | 1.00   | .54    | 3.15          | 11                             | 32                |
| - 49-44                       | 1.58               | 1.27   | .80    | 3.53          | 20                             | 59                |
| - 49-45                       | 1.70               | 1.21   | .64    | 3.48          | 11                             | 40                |
| - 49-48                       | 1.51               | 1.26   | .70    | 3.44          | 22                             | 60                |
| - 49-50                       | 1.38               | 1.04   | .56    | 3.16          | 9                              | 36                |
| - 49-55                       | 1.60               | 1.41   | .80    | 4.02          | 28                             | 62                |
| - 49-57                       | 1.45               | 1.33   | .76    | 3.43          | 11                             | 42                |
| - 49-58                       | 1.59               | 1.22   | .68    | 3.48          | 16                             | 42                |
| - 49-60                       | 1.54               | 1.15   | .74    | 3.50          | 25                             | 58                |
| - 49-64                       | 1.37               | .99    | .52    | 3.18          | 14                             | 32                |
| - 49-65                       | 1.52               | 1.33   | .74    | 3.50          | 22                             | 48                |
| - 49-68                       | 1.34               | 1.09   | .64    | 3.03          | 11                             | 22                |
| -49-69                        | 1.66               | 1.23   | .70    | 3.60          | 26                             | 59                |
| -49-72                        | 1.49               | 1.20   | .70    | 3.66          | 15                             | 51                |
| - 49-75                       | 1.49               | 1.10   | .60    | 3.50          | 16                             | 48                |
| Ranger                        | 1.47               | 1.31   | .75    | 3.51          | 21                             | 62                |
| A224                          | 1.44               | .97    | .52    | 3.00          | 6                              | 18                |
| A-226                         | 1.52               | 1.16   | .70    | 3.53          | 28                             | 50                |
| Buffalo                       | 1.34               | 1.06   | .63    | 3.44          | 21                             | 43                |
| Narragansett                  | 1.45               | 1.27   | .72    | 3.44          | 25                             | 50                |
| Atlantic                      | 1.39               | 1.14   | .70    | 3.30          | 24                             | 52                |
| Vernal (Wisc.Syn G)           | 1.43               | 1.20   | .69    | 3.42          | 22                             | 51                |
| Average                       | 1.47               | 1.22   | .72    | 3.41          | 20                             | 52                |
| F for Varieties<br>(Rand Blk) | 1.52*              | 2.00** | 2.18** | 2.11**        |                                |                   |
| L.S.D. (P = .05)              | .25                | .28    | .18    | .45           |                                |                   |

<sup>1/</sup> Grass and Weeds are included in yields reported for the first cutting on 6/13. Second and third cuttings were mostly alfalfa, no estimate of composition taken.

<sup>2/</sup> Stand notes are a good indicator of progeny longevity and survival. Symptoms of bacterial wilt were not observed - stand reductions were apparently due to other factors.

## NEW YORK - Ithaca

Table 29. 1956 data for 1951 alfalfa variety trial, Caldwell IV (1952-55 summary previously given). Broadcast seeded May 9, 1951. Seeding rate, 48 viable seeds/sq ft., 8 x 8 simple lattice with 4 replications. Cutting mgt. -3/season.

| Ident.                    | Yield - Tons/Acre |      |      |       | % Legume | % Stand |
|---------------------------|-------------------|------|------|-------|----------|---------|
|                           | 6/18              | 7/31 | 9/15 | Total | 6/18     | 10/29   |
| A-231 Syn. -1             | 1.78              | 1.27 | .80  | 3.84  | 69       | 26      |
| A-231 Syn. -2             | 1.73              | 1.41 | .87  | 4.01  | 86       | 29      |
| 00 - 2660                 | 1.26              | .80  | .42  | 2.48  | 42       | 14      |
| Cossack                   | 1.28              | .65  | .28  | 2.21  | 22       | 6       |
| Grimm F.C. 23647          | 1.44              | .87  | .39  | 2.70  | 26       | 6       |
| Ladak                     | 1.35              | .82  | .32  | 2.50  | 14       | 1       |
| Narragansett              | 1.14              | .76  | .29  | 2.19  | 32       | 6       |
| Oklahoma Common           | 1.25              | .93  | .54  | 2.72  | 54       | 14      |
| Talent                    | 1.29              | .85  | .38  | 2.52  | 14       | 12      |
| Williamsburg              | 1.33              | .98  | .50  | 2.80  | 56       | 14      |
| Atlantic                  | 1.44              | 1.10 | .53  | 3.08  | 25       | 11      |
| Buffalo                   | 1.53              | 1.17 | .73  | 3.43  | 45       | 18      |
| Kansas Common             | 1.66              | 1.25 | .69  | 3.61  | 62       | 16      |
| Ranger                    | 1.64              | 1.20 | .70  | 3.54  | 51       | 11      |
| Syn. -A Wis. 1949 G.B.    | 1.60              | 1.22 | .65  | 3.46  | 69       | 12      |
| Syn. -B Wis. 1949 G.B.    | 1.46              | 1.18 | .63  | 3.27  | 58       | 11      |
| Syn. -C Wis. 1950 Logan   | 1.78              | 1.38 | .78  | 3.95  | 75       | 30      |
| Syn. -E Wis. 1948 Wis.    | 1.70              | 1.52 | .86  | 4.08  | 86       | 32      |
| Vernal Wis.               | 1.81              | 1.40 | .75  | 3.96  | 64       | 15      |
| Atlantic 1948 N.J.        | 1.38              | .92  | .46  | 2.76  | 24       | 10      |
| Atlantic 1949 N.J.        | 1.60              | 1.14 | .57  | 3.30  | 61       | 18      |
| Atlantic 1950 N.J.        | 1.44              | .99  | .46  | 2.88  | 39       | 10      |
| Grimm 1950 Idaho          | 1.23              | .86  | .39  | 2.48  | 29       | 6       |
| Buffalo 1949              | 1.68              | 1.30 | .82  | 3.79  | 71       | 25      |
| Du Puits 1950             | 1.34              | .72  | .25  | 2.32  | 40       | 6       |
| Kansas Common 1950        | 1.55              | 1.48 | .86  | 3.89  | 89       | 35      |
| Narragansett 1946         | 1.38              | .86  | .36  | 2.61  | 45       | 5       |
| Narragansett 1948         | 1.36              | .78  | .34  | 2.48  | 24       | 8       |
| Narragansett 1950         | 1.31              | .88  | .34  | 2.53  | 45       | 6       |
| Ontario Variegated 1950   | 1.44              | .53  | .14  | 2.11  | 16       | 0       |
| Ranger 1950               | 1.46              | 1.18 | .66  | 3.30  | 66       | 15      |
| Ranger 1949               | 1.50              | 1.32 | .70  | 3.52  | 76       | 19      |
| Rhizoma 1948 B.C.         | 1.34              | .88  | .37  | 2.59  | 24       | 4       |
| Rhizoma 1949 B.C.         | 1.22              | .68  | .25  | 2.16  | 24       | 4       |
| Du Puits Dunn's Ltd. 1951 | 1.32              | .76  | .28  | 2.37  | 51       | 10      |
| Ille De France Dunn's     | 1.16              | .38  | .12  | 1.66  | 18       | 1       |

## NEW YORK - Ithaca

Table 29. Continued.

| Ident.                     | Yield - Tons/Acre |        |         |        | %<br>Legume | % Stand<br>Legume <u>1/</u> |
|----------------------------|-------------------|--------|---------|--------|-------------|-----------------------------|
|                            | 6/18              | 7/31   | 9/15    | Total  | 6/18        | 10/29                       |
| Marlborough Dunn's         | 1.60              | .95    | .34     | 2.89   | 70          | 10                          |
| Provence "                 | 1.16              | .54    | .19     | 1.89   | 20          | 5                           |
| Flamand "                  | 1.46              | .82    | .34     | 2.63   | 49          | 11                          |
| Rhizoma "                  | 1.00              | .61    | .23     | 1.84   | 14          | 2                           |
| English "                  | 1.09              | .38    | .10     | 1.58   | 8           | 0                           |
| Socheville                 | 1.30              | .45    | .15     | 1.90   | 15          | 4                           |
| C-5 NE-10 Polycross        | 1.74              | 1.29   | .72     | 3.74   | 80          | 18                          |
| Buffalo 1947 Kx. Non-cert. | 1.59              | 1.24   | .80     | 3.63   | 60          | 20                          |
| C125 NE-10 Polycross       | 1.70              | 1.28   | .72     | 3.71   | 62          | 19                          |
| C170 " "                   | 1.42              | 1.04   | .58     | 3.05   | 38          | 10                          |
| C172 " "                   | 1.56              | 1.23   | .68     | 3.48   | 69          | 15                          |
| C181 " "                   | 1.70              | 1.27   | .72     | 3.69   | 61          | 15                          |
| C186 " "                   | 1.63              | 1.00   | .55     | 3.18   | 35          | 8                           |
| C247 " "                   | 1.51              | 1.18   | .65     | 3.34   | 59          | 14                          |
| 49-5 " "                   | 1.63              | 1.40   | .73     | 3.76   | 75          | 16                          |
| 49-9 " "                   | 1.75              | 1.36   | .85     | 3.96   | 62          | 25                          |
| 49-18 " "                  | 2.02              | 1.57   | .91     | 4.50   | 74          | 36                          |
| 49-21 " "                  | 1.66              | 1.38   | .79     | 3.82   | 71          | 22                          |
| 49-23 " "                  | 1.55              | 1.16   | .64     | 3.35   | 61          | 12                          |
| 49-28 " "                  | 1.35              | 1.14   | .64     | 3.13   | 59          | 20                          |
| 49-31 " "                  | 1.78              | 1.35   | .78     | 3.91   | 61          | 19                          |
| 49-40 " "                  | 1.84              | 1.53   | .93     | 4.31   | 94          | 39                          |
| 49-42 " "                  | 1.60              | 1.58   | .69     | 3.63   | 79          | 16                          |
| 49-46 " "                  | 1.92              | 1.46   | .72     | 4.09   | 74          | 12                          |
| 49-47 " "                  | 1.72              | 1.39   | .78     | 3.89   | 85          | 28                          |
| 49-61 " "                  | 1.77              | 1.36   | .79     | 3.92   | 74          | 24                          |
| 49-27 or 67 Lot #1 NE 10PC | 1.70              | 1.49   | .79     | 3.97   | 82          | 26                          |
| 49-27 or 67 Lot #2 " "     | 1.46              | 1.18   | .65     | 3.30   | 55          | 16                          |
| Average                    | 1.51              | 1.08   | .56     | 3.14   | 52          | 15                          |
| F - Varieties              | 3.35**            | 8.58** | 15.48** | 8.41** |             |                             |
| L.S.D. (P = .05)           | .33               | .29    | .16     | .70    |             |                             |
| Coeff. of Var. (%)         | 15.77             | 19.43  | 20.82   | 16.04  |             |                             |

1/ Stand notes are indicative of survival after five years of 3-cutting management although this practice would not be recommended beyond 3 yrs. Bacterial wilt was observed on susceptible varieties after the 3rd yr. Stands were reduced quickly on low, less well-drained areas and not affected in some parts of the field. Stand notes do reflect relative wilt resistance. The 1950 Kansas Common lot is suspected of really being Buffalo.

## NEW YORK - Ithaca

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Table 30. 1956 summary for 1948 alfalfa plots. (1949-1955 summary previously given). Broadcast seeded May 1948. Seeding rate 5 x 5 balanced lattice, six replications

| Identification           | 1956 Yields <sup>1/</sup> Tons Per Acre |        |        | % Alfalfa |     | Alfalfa Fraction 1956 Total |
|--------------------------|-----------------------------------------|--------|--------|-----------|-----|-----------------------------|
|                          | 7/3                                     | 9/4    | Total  | 7/3       | 9/4 |                             |
| A-110 Neb.               | 1.96                                    | 1.72   | 3.68   | 80        | 86  | 3.05                        |
| A-111 Neb.               | 1.73                                    | 1.57   | 3.30   | 76        | 86  | 2.66                        |
| A-116 Neb.               | 1.66                                    | 1.56   | 3.22   | 88        | 65  | 2.47                        |
| A-117 Neb.               | 1.93                                    | 1.65   | 3.58   | 88        | 92  | 3.22                        |
| A-119 Neb.               | 2.09                                    | 1.61   | 3.70   | 88        | 91  | 3.30                        |
| Syn 1 Mont. Foundation   | 1.96                                    | 1.52   | 3.48   | 87        | 90  | 3.07                        |
| Syn 2 Mont. Registered   | 1.94                                    | 1.68   | 3.61   | 88        | 88  | 3.19                        |
| Syn 2 Arizona Certified  | 1.86                                    | 1.53   | 3.39   | 93        | 91  | 3.12                        |
| Syn 2 x Calif. Common    | 1.72                                    | 1.59   | 3.31   | 93        | 92  | 3.06                        |
| Syn 3 Arizona Ineligible | 1.68                                    | 1.57   | 3.25   | 77        | 91  | 2.72                        |
| Syn 0 Breeders           | 1.81                                    | 1.66   | 3.46   | 91        | 90  | 3.14                        |
| Syn 1 Neb. Foundation    | 1.63                                    | 1.57   | 3.20   | 87        | 84  | 2.74                        |
| Syn 2 Neb. Registered    | 2.04                                    | 1.69   | 3.73   | 92        | 86  | 3.33                        |
| Syn 3 Neb. Certified     | 1.88                                    | 1.62   | 3.49   | 88        | 88  | 3.08                        |
| Ontario Variegated       | .95                                     | .64    | 1.59   | 31        | 34  | .51                         |
| Buffalo                  | 2.00                                    | 1.77   | 3.77   | 86        | 90  | 3.31                        |
| Atlantic                 | 1.94                                    | 1.71   | 3.65   | 78        | 95  | 3.14                        |
| Williamsburg             | 1.57                                    | 1.62   | 3.19   | 84        | 89  | 2.76                        |
| Narragansett             | 1.60                                    | 1.44   | 3.04   | 70        | 86  | 2.36                        |
| A-224 Utah               | 1.84                                    | 1.61   | 3.44   | 88        | 85  | 2.99                        |
| Kansas Common            | 1.56                                    | 1.29   | 2.85   | 58        | 74  | 1.86                        |
| A-226 Nevada             | 1.95                                    | 1.70   | 3.66   | 96        | 93  | 3.45                        |
| A-225 Nebraska           | 2.13                                    | 1.68   | 3.82   | 90        | 86  | 3.36                        |
| A-225 Utah               | 2.04                                    | 1.71   | 3.75   | 95        | 90  | 3.48                        |
| Grimm Commercial         | 1.31                                    | 1.06   | 2.36   | 48        | 48  | 1.14                        |
| Mean                     | 1.79                                    | 1.55   | 3.34   | 82        | 84  | 2.77                        |
| F = Varieties            | 4.07**                                  | 9.61** | 8.79** |           |     |                             |
| L.S.D. (P = .05)         | .45                                     | .27    | .46    |           |     |                             |

<sup>1/</sup> The 8th year of production indicated stands were still about 3 plants/sq ft. and production about 2/3 that of what was obtained in the early harvest years. Many plots of wilt-susceptable varieties were reduced several yrs. ago but incidence of disease was spotty.



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Table 31. NE 28 - Alfalfa Test I. Summary 1957 Yield Data. Seeded May 1, 1956. Av. of 4 reps. Randomized block design - broadcast plots (seeding rate 10 lbs. acre).

| Entry           | Yield in Tons Dry Matter Per Acre |                           |              |
|-----------------|-----------------------------------|---------------------------|--------------|
|                 | <u>1st Cut</u><br>6/18/57         | <u>2nd Cut</u><br>7/25/57 | Season Total |
| 57-C10          | 1.68                              | 1.03                      | 2.70         |
| 57-C12          | 1.72                              | 1.01                      | 2.73         |
| 57-C42          | 1.59                              | .92                       | 2.51         |
| 57-C44          | 1.75                              | .82                       | 2.57         |
| 57-C57          | 1.60                              | .84                       | 2.44         |
| 57-C112         | 1.42                              | .88                       | 2.30         |
| 57-C188         | 1.60                              | .76                       | 2.36         |
| 57-NY49-33      | 1.68                              | .84                       | 2.52         |
| 57-NY49-40      | 1.54                              | .80                       | 2.34         |
| 57-NY49-55      | 1.59                              | .99                       | 2.58         |
| 57-NY49-60      | 1.50                              | .76                       | 2.26         |
| 57-NY49-72      | 1.48                              | .84                       | 2.31         |
| Atlantic        | 1.56                              | .78                       | 2.34         |
| Du Puits        | 1.49                              | .92                       | 2.42         |
| Narragansett    | 1.75                              | 1.00                      | 2.76         |
| Vernal          | 1.57                              | .93                       | 2.50         |
| Av. all entries | 1.59                              | .88                       | 2.48         |
| F Value Var.    | .58 (N.S.)                        | .53 (N.S.)                | .62 (N.S.)   |
| F Value V x C   |                                   |                           | .49          |
| C V %           | 16.33                             | 28.47                     | 20.65        |



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Table 32. NE-28 - Alfalfa test III. Summary 1957 Yield Data. Seeded May 1, 1956. Av. of 4 replications, randomized block design - Broadcast plots (seeding rate 10 lbs/acre).

| Entry                 | Yield in Ton Dry Matter Per Acre |                           | Season Total |
|-----------------------|----------------------------------|---------------------------|--------------|
|                       | <u>1st Cut</u><br>6/18/57        | <u>2nd Cut</u><br>7/25/57 |              |
| 57 Pa (51-A-542 11-5) | 2.08                             | 1.04                      | 3.12         |
| 57 Pa (51-A-516 7-15) | 1.60                             | .61                       | 2.20         |
| 57 Pa (51-A-503 7-7)  | 1.85                             | .84                       | 2.69         |
| 57 Pa (51-A-504 7-9)  | 1.96                             | 1.03                      | 2.98         |
| 57 Pa (51-A-513 7-16) | 1.83                             | 1.00                      | 2.82         |
| 57 Pa (51-A-511 7-12) | 1.80                             | .82                       | 2.62         |
| Atlantic              | 1.87                             | 1.17                      | 3.04         |
| Du Puits              | 1.53                             | 1.12                      | 2.65         |
| Narragansett          | 2.07                             | 1.24                      | 3.30         |
| Vernal                | 1.61                             | .97                       | 2.58         |
| Av. all Entries       | 1.82                             | .98                       | 2.79         |
| F Var.                | 1.54 (N.S.)                      | 5.80**                    | 3.42**       |
| F V x C               |                                  |                           | 1.35 (N.S.)  |
| L.S.D. Var. .05       |                                  | .23                       | .49          |
| L.S.D. Var. .01       |                                  | .30                       | .66          |
| C V %                 | 17.06                            | 15.78                     | 17.51        |

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Table 33. NE-28 - Alfalfa synthetics and checks, 1957 Yield Data. Seeded May 1, 1956, Av. of 4 replications, randomized block design - Broadcast plots (seeding rate 10 lbs acre).

| Entry           | Yield in Tons Dry Matter Per Acre |                    |              |
|-----------------|-----------------------------------|--------------------|--------------|
|                 | 1st cut<br>6/18/57                | 2nd cut<br>7/25/57 | Season Total |
| Indiana Syn. F  | 2.10                              | 1.11               | 3.21         |
| New York A      | 2.12                              | 1.13               | 3.25         |
| New York B      | 2.01                              | 1.14               | 3.15         |
| New York C      | 2.04                              | 1.12               | 3.15         |
| Syn. A-242      | 1.93                              | .94                | 2.87         |
| Buffalo         | 1.74                              | 1.08               | 2.83         |
| Williamsburg    | 1.91                              | 1.08               | 2.98         |
| Lahontan        | 1.73                              | .72                | 2.45         |
| Ranger          | 1.85                              | 1.02               | 2.78         |
| Atlantic        | 2.03                              | 1.15               | 3.18         |
| Du Puits        | 2.04                              | 1.25               | 3.30         |
| Narragansett    | 1.96                              | 1.30               | 3.26         |
| Vernal          | 1.94                              | 1.18               | 3.13         |
| Av. all Entries | 1.95                              | 1.09               | 3.05         |
| F Value Var.    | 1.49 (N.S.)                       | 9.20**             | 4.68**       |
| L.S.D. Var. .05 |                                   | .14                | .32          |
| L.S.D. Var. .01 |                                   | .18                | .42          |
| F Value V x C   |                                   |                    | 1.17 (N.S.)  |
| C V %           | 10.34                             | 8.75               | 10.33        |

## PENNSYLVANIA - University Park

Table 34. NE-28 - Alfalfa Clones - Notes on spaced plants.

| Variety or Treatment | CHARACTERIZATIONS RATED    |                             |                             |                      |                             |                                       |                                   |                                       |                                   |                                       | Amt. of*<br>Flowering Uprightness**** |
|----------------------|----------------------------|-----------------------------|-----------------------------|----------------------|-----------------------------|---------------------------------------|-----------------------------------|---------------------------------------|-----------------------------------|---------------------------------------|---------------------------------------|
|                      | 7/30/57<br>After<br>Math * | 7/30/57<br>Leaf<br>Color ** | 8/28/57<br>Leaf<br>Color ** | 8/28/57<br>Leafiness | 8/28/57<br>Leaf<br>Size *** | 8/28/57<br>Leaf Spot<br>Infection *** | 8/28/57<br>Leaf Hopper*<br>Damage | 8/28/57<br>Leaf Spot<br>Infection *** | 8/28/57<br>Leaf Hopper*<br>Damage | 8/28/57<br>Leaf Spot<br>Infection *** |                                       |
| C-10                 | 3.75                       | 2.75                        | 3.25                        | 3.00                 | 3.00                        | 2.25                                  | 2.25                              | 2.25                                  | 2.25                              | 2.25                                  | 1.75                                  |
| C12                  | 5.75                       | 3.00                        | 3.25                        | 3.25                 | 2.75                        | 3.50                                  | 3.50                              | 3.50                                  | 3.50                              | 3.50                                  | 4.50                                  |
| C-42                 | 4.75                       | 3.00                        | 2.50                        | 2.00                 | 3.00                        | 2.50                                  | 4.00                              | 2.50                                  | 4.00                              | 2.50                                  | 1.25                                  |
| C-44                 | 3.25                       | 2.75                        | 2.25                        | 2.25                 | 2.25                        | 2.75                                  | 3.25                              | 2.75                                  | 3.25                              | 2.75                                  | 2.00                                  |
| C-53                 | 8.00                       | 4.50                        | 2.75                        | 4.25                 | 3.25                        | 4.00                                  | 2.50                              | 4.00                                  | 2.50                              | 4.00                                  | 5.00                                  |
| C-57                 | 2.50                       | 2.25                        | 1.75                        | 2.00                 | 1.50                        | 2.25                                  | 2.0                               | 2.25                                  | 2.0                               | 2.25                                  | 4.50                                  |
| C-79                 | 6.50                       | 2.75                        | 2.50                        | 2.25                 | 2.50                        | 2.75                                  | 5.00                              | 2.75                                  | 5.00                              | 2.75                                  | 1.75                                  |
| C-91                 | 3.75                       | 2.75                        | 3.50                        | 2.25                 | 1.50                        | 3.00                                  | 3.50                              | 3.00                                  | 3.50                              | 3.00                                  | 3.50                                  |
| C-112                | 7.00                       | 2.00                        | 3.75                        | 2.75                 | 1.75                        | 2.50                                  | 4.25                              | 2.50                                  | 4.25                              | 2.50                                  | 1.75                                  |
| C-187                | 4.00                       | 2.00                        | 4.00                        | 1.75                 | 3.00                        | 2.00                                  | 3.75                              | 2.00                                  | 3.75                              | 2.00                                  | 1.50                                  |
| C-188                | 7.00                       | 2.50                        | 3.25                        | 3.75                 | 3.00                        | 4.00                                  | 3.75                              | 4.00                                  | 3.75                              | 4.00                                  | 3.00                                  |
| C-191                | 7.00                       | 4.50                        | 3.50                        | 3.00                 | 3.75                        | 3.25                                  | 2.50                              | 3.25                                  | 2.50                              | 3.25                                  | 3.75                                  |
| C-196                | 7.25                       | 3.50                        | 3.75                        | 3.75                 | 2.50                        | 2.50                                  | 2.50                              | 2.50                                  | 2.50                              | 2.50                                  | 5.00                                  |
| C-199                | 4.00                       | 3.25                        | 2.00                        | 2.50                 | 2.00                        | 2.00                                  | 3.25                              | 2.00                                  | 3.25                              | 2.00                                  | 3.00                                  |
| C-221                | 4.25                       | 3.25                        | 4.00                        | 3.00                 | 1.75                        | 3.75                                  | 3.25                              | 3.75                                  | 3.25                              | 3.75                                  | 4.00                                  |
| NY 49-6              | 4.50                       | 3.00                        | 1.25                        | 2.00                 | 1.00                        | 3.25                                  | 3.50                              | 3.25                                  | 3.50                              | 3.25                                  | 3.50                                  |
| -9                   | 5.75                       | 3.25                        | 2.50                        | 2.25                 | 2.75                        | 2.50                                  | 4.25                              | 2.50                                  | 4.25                              | 2.50                                  | 4.50                                  |
| -14                  | 8.75                       | 4.25                        | 4.00                        | 4.00                 | 4.25                        | 1.25                                  | 4.50                              | 1.25                                  | 4.50                              | 1.25                                  | 1.50                                  |
| -18                  | 7.50                       | 4.50                        | 4.00                        | 3.25                 | 3.25                        | 1.25                                  | 4.50                              | 1.25                                  | 4.50                              | 1.25                                  | 3.00                                  |
| -19                  | 4.25                       | 2.25                        | 2.50                        | 2.00                 | 3.00                        | 2.00                                  | 4.00                              | 2.00                                  | 4.00                              | 2.00                                  | 2.50                                  |
| -33                  | 2.50                       | 1.50                        | 2.50                        | 1.25                 | 3.25                        | 2.25                                  | 5.00                              | 2.25                                  | 5.00                              | 2.25                                  | 1.00                                  |
| -40                  | 3.75                       | 2.75                        | 3.75                        | 2.25                 | 2.50                        | 2.25                                  | 2.50                              | 2.25                                  | 2.50                              | 2.25                                  | 3.00                                  |
| -55                  | 5.00                       | 1.25                        | 1.50                        | 2.00                 | 2.50                        | 3.00                                  | 4.50                              | 3.00                                  | 4.50                              | 3.00                                  | 1.00                                  |
| -57                  | 5.25                       | 3.75                        | 3.25                        | 3.75                 | 2.75                        | 2.00                                  | 2.50                              | 2.00                                  | 2.50                              | 2.00                                  | 3.25                                  |
| -60                  | 5.50                       | 3.75                        | 3.75                        | 4.25                 | 3.00                        | 3.00                                  | 3.00                              | 3.00                                  | 3.00                              | 3.00                                  | 2.00                                  |
| -72                  | 5.75                       | 2.50                        | 2.25                        | 3.25                 | 2.25                        | 2.25                                  | 3.75                              | 2.25                                  | 3.75                              | 2.25                                  | 2.00                                  |
| -75                  | 6.00                       | 2.75                        | 3.00                        | 3.50                 | 3.75                        | 1.75                                  | 3.00                              | 1.75                                  | 3.00                              | 1.75                                  | 2.00                                  |
| 31A-503              | 3.25                       | 3.50                        | 3.25                        | 3.00                 | 2.50                        | 3.25                                  | 1.25                              | 3.25                                  | 1.25                              | 3.25                                  | 3.00                                  |
| -504                 | 2.50                       | 3.25                        | 4.25                        | 2.25                 | 2.00                        | 2.75                                  | 1.25                              | 2.75                                  | 1.25                              | 2.75                                  | 1.25                                  |
| -505                 | 2.75                       | 3.00                        | 2.50                        | 2.25                 | 1.50                        | 2.00                                  | 2.00                              | 2.00                                  | 2.00                              | 2.00                                  | 2.25                                  |
| -511                 | 4.25                       | 3.50                        | 3.00                        | 3.25                 | 3.00                        | 3.25                                  | 3.00                              | 3.25                                  | 3.00                              | 3.25                                  | 3.00                                  |
| -513                 | 3.00                       | 2.25                        | 1.25                        | 1.75                 | 1.25                        | 2.75                                  | 2.50                              | 2.75                                  | 2.50                              | 2.75                                  | 1.00                                  |
| -516                 | 2.25                       | 3.00                        | 3.25                        | 2.50                 | 2.00                        | 2.50                                  | 2.25                              | 2.50                                  | 2.25                              | 2.50                                  | 2.25                                  |
| -524                 | 5.00                       | 3.25                        | 3.50                        | 2.25                 | 1.75                        | 3.25                                  | 4.25                              | 3.25                                  | 4.25                              | 3.25                                  | 2.75                                  |
| -542                 | 3.75                       | 2.75                        | 1.25                        | 1.75                 | 1.00                        | 2.25                                  | 3.25                              | 2.25                                  | 3.25                              | 2.25                                  | 1.00                                  |
| F Value              | 11.62                      | 6.34                        | 5.13                        | 3.46                 | 15.60                       | 1.85                                  | 14.69                             | 1.85                                  | 14.69                             | 1.85                                  | 8.14                                  |
| F Value(F Val. .05   | 1.57                       | 1.57                        | 1.57                        | 1.57                 | 1.57                        | 1.57                                  | 1.57                              | 1.57                                  | 1.57                              | 1.57                                  | 1.57                                  |
| Required(F Val..01   | 1.89                       | 1.89                        | 1.89                        | 1.89                 | 1.89                        | 1.89                                  | 1.89                              | 1.89                                  | 1.89                              | 1.89                                  | 1.89                                  |
| L.S.D. Var. .05      |                            |                             |                             |                      |                             |                                       | .715                              |                                       | .715                              |                                       | 1.188                                 |
| L.S.D. Var. .01      | 1.887                      | 1.089                       | 1.418                       | 1.491                | .763                        | 1.800                                 | .945                              | 1.800                                 | .945                              | 1.800                                 | 1.570                                 |
| C V %                | 21.00                      | 14.11                       | 26.90                       | 30.64                | 16.34                       | 37.08                                 | 15.69                             | 37.08                                 | 15.69                             | 37.08                                 | 34.53                                 |

\* 1 = least 10 = most

\*\* 1 = lightest 5 = darkest

\*\*\* 1 = least 5 = most

\*\*\*\* 1 = prostrate 10 = upright

## PENNSYLVANIA - University Park

Table 35. Alfalfa - Miscellaneous entries. Summary 1957 yield data.  
Seeded May 1, 1956. Av. of 4 replications, randomized block  
design - broadcast plots (Seeding rate 10 lbs acre).

| Entry           | Yield in tons dry matter/Acre |             |              |
|-----------------|-------------------------------|-------------|--------------|
|                 | 1st Cut                       | 2nd Cut     | Season Total |
| PI 230223       | 2.34                          | 1.05        | 3.40         |
| PI 230225       | 2.10                          | .90         | 3.00         |
| Weibull's Alfa  | 2.05                          | 1.24        | 3.28         |
| Tourneur #501   | 2.14                          | .99         | 3.13         |
| Du Puits        | 2.05                          | 1.02        | 3.08         |
| Ranger          | 2.22                          | .82         | 3.04         |
| Narragansett    | 2.32                          | .94         | 3.26         |
| Av. all Entries | 2.17                          | .99         | 3.17         |
| F Value Var.    | 1.03 (N.S.)                   | 2.37 (N.S.) | 1.00 (N.S.)  |
| F Value V x C   |                               |             | 1.98 (N.S.)  |
| C V %           | 10.87                         | 17.46       | 13.15        |

## PENNSYLVANIA

Table 36. Season Yield of Alfalfa Varieties at Seven Locations in Pennsylvania 1956.  
Yield in Tons Dry Matter Per Acre (Alfalfa Fraction) Randomized Block Design -  
Broadcast Plots - Av. of Four Replication

| Location:<br>Date Seeded: | Allen-<br>town |        | Butler |         | Couders-<br>port |         | McConnells-<br>burg |          | Meadville |        | Troy   |        | Univ.<br>Park |              |
|---------------------------|----------------|--------|--------|---------|------------------|---------|---------------------|----------|-----------|--------|--------|--------|---------------|--------------|
|                           | 5/6/55         | 3 cuts | 5/2/55 | 2 cuts  | 5/5/55           | 2 cuts  | 5/5/55              | 3 cuts   | 5/3/55    | 2 cuts | 5/6/55 | 2 cuts | 8/25/55       | Aver-<br>age |
| NUMBER OF HARVESTS        |                |        |        |         |                  |         |                     |          |           |        |        |        |               |              |
| Variety                   | 3 cuts         | 2 cuts | 2 cuts | 2 cuts  | 2 cuts           | 2 cuts  | 3 cuts              | 3 cuts   | 2 cuts    | 2 cuts | 3 cuts | 3 cuts | 3 cuts        | 3 cuts       |
| Du Puits                  | 4.38           | 2.74   | 2.94   | 5.42    | 2.53             | 3.14    | 1.82                | 3.28     |           |        |        |        |               |              |
| Nomad                     | 2.86           | 2.15   | 2.34   | 3.00    | 1.09             | 2.14    | 1.41                | 2.62     |           |        |        |        |               |              |
| Buffalo                   | 3.29           | 2.12   | 2.46   | 4.07    | 1.27             | 1.03    | 1.00                | 2.18     |           |        |        |        |               |              |
| Ranger                    | 3.14           | 2.34   | 2.49   | 4.09    | 1.75             | 1.45    | 1.12                | 2.34     |           |        |        |        |               |              |
| Vernal                    | 3.73           | 3.27   | 2.90   | 4.56    | 2.20             | 2.78    | 1.98                | 3.06     |           |        |        |        |               |              |
| Narragansett              | 3.66           | 2.74   | 2.65   | 4.54    | 2.63             | 2.17    | 1.56                | 2.85     |           |        |        |        |               |              |
| Atlantic                  | 3.94           | 2.86   | 2.56   | 4.38    | 2.29             | 2.41    | 1.62                | 2.87     |           |        |        |        |               |              |
| A-224                     | 3.27           | 2.76   | 2.96   | 3.36    | 1.51             | 2.48    | 1.29                | 2.52     |           |        |        |        |               |              |
| Grimm                     | 2.89           | 2.55   | 2.65   | 3.76    | 2.31             | 2.39    | 1.32                | 2.55     |           |        |        |        |               |              |
| Av.                       | 3.46           | 2.61   | 2.66   | 4.13    | 1.95             | 2.14    | 1.41                | 2.62     |           |        |        |        |               |              |
| F Value Var.              | 11.27***       | 2.33*  | 2.47*  | 7.25*** | 7.86***          | 5.60*** | 8.23***             | 17.96*** |           |        |        |        |               |              |
| L.S.D. .05                | .42            | .52    | .36    | .78     | .58              | .43     | .67                 | .21      |           |        |        |        |               |              |
| C V %                     | 15.01          | 19.47  | 13.61  | 22.99   | 29.20            | 30.24   | 39.44               | 23.30    |           |        |        |        |               |              |



## PENNSYLVANIA

Table 37. Yield of Alfalfa Varieties at Six Locations in Pennsylvania 1957. Yield in Tons Dry Matter Per Acre. Average four replications.

| Allen- Couders- |         |         |         |         |                |         |        |           |         |        |               |         |  |         |
|-----------------|---------|---------|---------|---------|----------------|---------|--------|-----------|---------|--------|---------------|---------|--|---------|
| Variety         | town    |         | port    |         | McConnellsburg |         |        | Meadville |         |        | State College |         |  | Troy    |
|                 | (1 cut) |         | (1 cut) |         | Total          |         |        | Total     |         |        | Total         |         |  | (1 cut) |
|                 | 6/5/57  | 6/21/57 | 6/6/57  | 7/26/57 | 2 cuts         | 6/14/57 | 8/2/57 | 2 cuts    | 6/25/57 | 8/5/57 | 2 cuts        | 6/20/57 |  |         |
| Du Puits        | 1.63    | .75     | 1.47    | .93     | 2.40           | 1.73    | 1.27   | 3.10      | 1.62    | .74    | 2.36          | 1.57    |  |         |
| Nomad           | .52     | .67     | .83     | .56     | 1.38           | .98     | .82    | 1.79      | .91     | .36    | 1.28          | .95     |  |         |
| Buffalo         | 1.09    | .59     | 1.41    | 1.09    | 2.50           | .82     | .61    | 1.43      | .87     | .40    | 1.27          | .96     |  |         |
| Ranger          | 1.35    | .72     | .93     | .92     | 1.86           | 1.16    | .73    | 1.89      | 1.11    | .51    | 1.62          | 1.48    |  |         |
| Vernal          | .98     | .73     | 1.51    | 1.27    | 2.78           | 1.36    | 1.18   | 2.54      | 1.63    | .74    | 2.36          | 1.80    |  |         |
| Narragansett    | 1.38    | 1.13    | 1.44    | 1.27    | 2.71           | 1.54    | 1.29   | 2.83      | 1.36    | .82    | 2.18          | 1.61    |  |         |
| Atlantic        | 1.00    | .64     | 1.21    | 1.11    | 2.31           | 1.44    | .98    | 2.41      | 1.57    | .67    | 2.24          | 1.54    |  |         |
| A-224           | .66     | .60     | .86     | .95     | 1.82           | .88     | .89    | 1.76      | 1.37    | .56    | 1.93          | 1.49    |  |         |
| Grimm           | .75     | .89     | 1.14    | 1.04    | 2.17           | 1.27    | .93    | 2.20      | 1.44    | .74    | 2.18          | 1.42    |  |         |
| Av. All         | 1.04    | .75     | 1.20    | 1.02    | 1.11           | 1.24    | .97    | 2.21      | 1.32    | .62    | 1.94          | 1.43    |  |         |
| F Var.          | 13.13** | 1.17    | 6.11**  | 3.31*   | 7.93**         | 3.69**  | 3.18*  | 6.48**    | 4.79**  | 3.28*  | 7.51**        | 2.86*   |  |         |
|                 |         | (N.S.)  |         |         |                |         |        |           |         |        |               |         |  |         |
| L.S.D. .05      | .29     | ---     | .32     | .34     | .46            | .47     | .42    | .61       | .39     | .26    | .46           | .50     |  |         |
| L.S.D. .01      | .38     | ---     | .44     | ---     | .62            | .64     | ---    | .82       | .53     | ---    | .61           | ---     |  |         |
| C V %           | 19.33   | 41.80   | 18.45   | 16.52   | 20.76          | 25.10   | 29.50  | 27.53     | 20.14   | 29.27  | 23.48         | 23.70   |  |         |

## RHODE ISLAND - Kingston

## Alfalfa Variety and Strain Testing

1957

The 1957 growing season was extremely dry and variable growth and leaf loss of alfalfa occurred in the experimental area prior to the first cutting. It is estimated that the drought reduced expected yields by about one-third. Foliage diseases were not important in 1957.

Table 38 presents yield data in tons per acre at 12 percent moisture.

1. Seeded - May 2, 1956  
Randomized block design - 4 replications
2. Seeding rate - 12 lbs. per acre, germinable seed.
3. Fertilizer - 600 lbs. per acre 0-15-30 in split application annually.
4. Harvest dates and stage of maturity -  
June 25 - one half bloom  
August 29 - one half bloom

## RHODE ISLAND - Kingston

Table 38. Uniform alfalfa test, 1957 results. Seeded - May 1956 (broadcast). Experimental design - Randomized block - 4 reps.

| Variety          | Stand<br>(percent)<br>8/29 | Total Yield - 12% Moisture |                 |                 |
|------------------|----------------------------|----------------------------|-----------------|-----------------|
|                  |                            | 1st Cut<br>6/25            | 2nd Cut<br>8/29 | Season<br>Yield |
| Atlantic         | 73.8                       | 1.82                       | 1.00            | 2.82            |
| Williamsburg     | 71.2                       | 1.40                       | 0.81            | 2.21            |
| Ranger           | 65.0                       | 1.61                       | 0.73            | 2.34            |
| Narragansett     | 68.8                       | 1.98                       | 0.82            | 2.80            |
| Buffalo          | 65.0                       | 1.33                       | 0.70            | 2.03            |
| Grimm            | 70.0                       | 1.02                       | 0.80            | 1.81            |
| Rhizoma          | 72.5                       | 1.38                       | 0.90            | 2.28            |
| Lahontan         | 63.8                       | 1.03                       | 0.70            | 1.73            |
| Du Puits         | 72.5                       | 2.03                       | 0.94            | 2.97            |
| Vernal           | 66.2                       | 1.34                       | 0.90            | 2.24            |
| Sevelra          | 65.0                       | 1.46                       | 0.76            | 2.22            |
| Talent           | 66.2                       | 1.22                       | 0.74            | 1.96            |
| Nomad            | 52.5                       | 1.09                       | 0.50            | 1.60            |
| A-224            | 62.5                       | 1.19                       | 0.77            | 1.96            |
| Average          | 66.8                       | 1.42                       | 0.79            | 2.21            |
| L.S.D. (P = .05) | 4.9                        | .45                        | .13             | .50             |
| C.V.%            | 5.08                       | 21.97                      | 11.52           | 15.79           |

## SOUTH CAROLINA

Table 39. Performance of alfalfa varieties in South Carolina

| Hay yields in tons per acre <sup>1/</sup>      |                       |      |         |                        |      |         |                                  |
|------------------------------------------------|-----------------------|------|---------|------------------------|------|---------|----------------------------------|
| Variety                                        | Clemson <sup>2/</sup> |      |         | Florence <sup>3/</sup> |      |         | 2-year,<br>2-location<br>average |
|                                                | 1956                  | 1957 | Average | 1956                   | 1957 | Average |                                  |
| Narragansett                                   | 2.60                  | 4.81 | 3.71    | 4.24                   | 3.99 | 4.12    | 3.92                             |
| Du Puits                                       | 2.23                  | 4.95 | 3.59    | 4.26                   | 4.15 | 4.21    | 3.90                             |
| Socheville                                     | 2.22                  | 4.87 | 3.55    | 4.38                   | 4.12 | 4.25    | 3.90                             |
| Williamsburg                                   | 2.12                  | 4.81 | 3.47    | 4.15                   | 4.00 | 4.08    | 3.78                             |
| Oklahoma Com.                                  | 2.24                  | 4.79 | 3.52    | 4.25                   | 3.72 | 3.99    | 3.76                             |
| Vernal                                         | 2.35                  | 4.66 | 3.51    | 4.01                   | 3.89 | 3.95    | 3.73                             |
| Ranger                                         | 2.22                  | 4.47 | 3.35    | 4.07                   | 3.95 | 4.01    | 3.68                             |
| Caliverde                                      | 2.27                  | 4.46 | 3.37    | 4.23                   | 3.61 | 3.92    | 3.65                             |
| Sandhill Com.                                  | 1.98                  | 4.59 | 3.29    | 3.84                   | 4.15 | 4.00    | 3.65                             |
| Kansas Common                                  | 1.98                  | 4.58 | 3.28    | 4.06                   | 3.91 | 3.99    | 3.64                             |
| Atlantic                                       | 2.07                  | 4.46 | 3.27    | 4.28                   | 3.55 | 3.92    | 3.60                             |
| Buffalo                                        | 2.17                  | 4.70 | 3.44    | 3.86                   | 3.54 | 3.70    | 3.57                             |
| Indian                                         | 2.17                  | 3.99 | 3.08    | 4.67                   | 3.30 | 3.99    | 3.54                             |
| Arizona Com.                                   | 1.94                  | 4.81 | 3.38    | 3.72                   | 3.22 | 3.47    | 3.43                             |
| African                                        | 1.97                  | 3.57 | 2.77    | 4.48                   | 3.15 | 3.82    | 3.30                             |
| NK-100                                         | 1.91                  | 3.63 | 2.77    | 4.43                   | 2.64 | 3.54    | 3.16                             |
| Least significant                              |                       |      |         |                        |      |         |                                  |
| difference (5%                                 |                       |      |         |                        |      |         |                                  |
| level)                                         |                       |      |         |                        |      |         |                                  |
|                                                | .40                   | .35  | --      | .32                    | .36  |         |                                  |
| Coefficient of                                 |                       |      |         |                        |      |         |                                  |
| variation                                      |                       |      |         |                        |      |         |                                  |
|                                                | 14%                   | 6%   |         | 6%                     | 8%   |         |                                  |
| 1/ Forage yields calculated on oven-dry basis. |                       |      |         |                        |      |         |                                  |

<sup>1/</sup> Forage yields calculated on oven-dry basis.

|                           | <u>2/Clemson</u>                                                                                      | <u>3/Florence</u>                    |
|---------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------|
| Date seeded               | Oct. 15, 1955                                                                                         | Oct. , 1955                          |
| Size of plots             | 5' x 15' (harvested 3' x 13')                                                                         | 5' x 15' harvested<br>(2-2/3' x 14') |
| Plot design               | 5 x 5 balanced lattice                                                                                | Randomized block                     |
| Number of replicates      | 5                                                                                                     | 5                                    |
| Rate of seeding           | 40 pounds broadcast                                                                                   | 40 pounds broadcast                  |
| Fertilization(1955)       | 2-1/2 tons lime<br>800 lbs 3-12-12<br>900 lbs superphosphate<br>50 lbs complete minor<br>element frit |                                      |
| (May 1957)                | 500 lbs 0-14-20                                                                                       |                                      |
| Dates of harvesting(1956) | May 7, July 25                                                                                        | May 11, June 18<br>July 16, Aug. 8   |
| (1957)                    | April 30, June 11<br>July 10, Sept. 12<br>November 5                                                  | April 24, May 29<br>June 18          |

## WEST VIRGINIA

Hay yields from test plantings in West Virginia for known varieties released several years ago as well as those released in recent years are reported in Tables 43 and 44. As an average of the two test locations, Narragansett produced the highest yield, followed by Rhizoma, Williamsburg and Atlantic. Vernal was tested only at Morgantown but from these results, along with other observations, it appears to be one of the better varieties. Because of their winter hardiness and yielding capacity of good quality forage Narragansett, Atlantic and Vernal are recommended for general use in West Virginia.

Williamsburg produced well, and has the advantage of quick recovery after cutting. However, because of less winter hardiness than the recommended varieties it is best suited for growing in rotations where the alfalfa stand is expected to last only two to three years.

Rhizoma produced well at both locations. At present, seed is difficult to obtain and its cost is relatively high. It may not be quite as persistent as the recommended varieties listed above.

In 1955, seed yields of several alfalfa varieties were taken. The varieties and yield of seed in pounds per acre are reported in Table 42. No pollinating insects were used and no special effort was made to trip alfalfa flowers in an attempt to produce high seed yields.



WEST VIRGINIA - Point Pleasant

NOT FOR PUBLICATION

Table 40. Yield in tons of dry matter per acre of several varieties of alfalfa. 1952-1954. Average of four replications

| Variety          | 1952<br>2-Cuts<br>Tons/A. | 1953<br>3-Cuts<br>Tons/A. | 1954<br>3-Cuts<br>Tons/A. | Average<br>3-Year<br>Tons/A. |
|------------------|---------------------------|---------------------------|---------------------------|------------------------------|
| Narragansett     | 2.64                      | 4.14                      | 4.67                      | 3.82                         |
| Williamsburg     | 2.17                      | 3.43                      | 4.14                      | 3.25                         |
| Atlantic         | 2.00                      | 2.80                      | 3.60                      | 2.80                         |
| Grimm            | 2.03                      | 3.26                      | 3.48                      | 2.92                         |
| Rhizoma          | 2.26                      | 3.74                      | 3.94                      | 3.31                         |
| Buffalo          | 2.26                      | 3.40                      | 3.76                      | 3.14                         |
| Ranger           | 2.38                      | 2.65                      | 3.55                      | 2.86                         |
| Kansas Common    | 1.75                      | 2.74                      | 4.08                      | 2.86                         |
| North Commercial | 2.24                      | 2.90                      | 3.14                      | 2.76                         |
| Average          | 2.19                      | 3.23                      | 3.82                      | 3.08                         |
| L.S.D. .05       | .12                       | .18                       | .17                       | --                           |
| .01              | .16                       | .24                       | .23                       | --                           |

## WEST VIRGINIA - Morgantown

Table 41. Yield in tons of dry matter per acre of several varieties of alfalfa. 1955- 1957. Average of four replications.

| Variety      | 1955              | 1956              | 1957              | Average           |
|--------------|-------------------|-------------------|-------------------|-------------------|
|              | 3-Cuts<br>Tons/A. | 3-Cuts<br>Tons/A. | 3-Cuts<br>Tons/A. | 3-year<br>Tons/A. |
| Narragansett | 3.23              | 3.05              | 2.77              | 3.02              |
| Williamsburg | 3.12              | 3.30              | 3.15              | 3.19              |
| Atlantic     | 3.49              | 3.66              | 3.37              | 3.51              |
| Grimm        | 2.71              | 3.07              | 3.01              | 2.93              |
| Vernal       | 3.20              | 3.40              | 2.88              | 3.16              |
| Rhizoma      | 3.32              | 3.63              | 3.39              | 3.45              |
| Buffalo      | 2.50              | 2.48              | 2.47              | 2.48              |
| Ranger       | 2.82              | 3.07              | 3.07              | 2.99              |
| Average      | 3.05              | 3.21              | 3.01              | 3.09              |
| LSD .05      | .57               | .46               | .42               | --                |
| .01          | NS                | .62               | .57               | --                |

WEST VIRGINIA - Morgantown

Table 42. Seed Yields in pounds per acre of several alfalfa varieties.  
1955 - Average of four replications

| Variety      | Pounds of Seed per Acre |
|--------------|-------------------------|
| Narragansett | 23                      |
| Williamsburg | 40                      |
| Atlantic     | 48                      |
| Grimm        | 29                      |
| Vernal       | 26                      |
| Rhizoma      | 34                      |
| Buffalo      | 36                      |
| Ranger       | 33                      |
| Average      | 34                      |







